



# STIC Search Report

## EIC 1700

STIC Database Tracking Number: 123901

**TO:** Vickey Ronesi  
**Location:** REM 10D20  
**Art Unit :** 1714  
**June 9, 2004**

**Case Serial Number:** 10/072612

**From:** Kathleen Fuller  
**Location:** EIC 1700  
**REMSEN 4B28**  
**Phone:** 571/272-2505  
**Kathleen.Fuller@uspto.gov**

### Search Notes

I searched each of the 6 components as a component registry number of a polymer. There were only 3 polymers meeting that criterion and 3 Chemical Abstract references from the 3 polymers. However the 3 polymers contained other components in addition to the desired 6. I then searched for polymers containing 5 of the desired components and limited the polymers to those containing 5-6 components. There were 26 CA references. All of the CA references were printed with the polymers structures following the reference.

The application for hits case has been indexed by CA but the 6 component polymer is not assigned a registry number, just mentioned in the abstract, and thus is not structurally indexed. Only the MBS polymer is indexed and assigned a Registry number.

I checked the Cyro website and did not find specific information on the polymer .



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713  
➤ Relevant prior art **found**, search results used as follows:

- 102 rejection
- 103 rejection
- Cited as being of interest.
- Helped examiner better understand the invention.
- Helped examiner better understand the state of the art in their technology.

*Types of relevant prior art found:*

- Foreign Patent(s)
- Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art **not found**:

- Results verified the lack of relevant prior art (helped determine patentability).
- Results were not useful in determining patentability or understanding the invention.

**Comments:**

Drop off or send completed forms to EIC1700 REMSEN 4B28



Mellerson, Kendra

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**From:** Unknown@Unknown.com  
**Sent:** Friday, June 04, 2004 4:53 PM  
**To:** STIC-EIC1700  
**Subject:** Generic form response

ResponseHeader=Commercial Database Search Request

AccessDB#= 123901

LogNumber= \_\_\_\_\_

Searcher= \_\_\_\_\_

SearcherPhone= \_\_\_\_\_

SearcherBranch= \_\_\_\_\_

MyDate=Fri Jun 4 16:53:25 EDT 2004

submitto=STIC-EIC1700@uspto.gov

Name=Vickey Ronesi

Empno=80299

Phone=571-272-2701

Artunit=1714

Office=Remsen 10D20

Serialnum=10/072612

PatClass=526/319,329.2,329.3,329.7,328.5,341,342,347.1

Earliest=02/06/2001

Format3=email

Searchtopic=The invention is a blend comprising an acrylic based multipolymer and a MBS copolymer rubber. The composition of the multipolymer is as follows (in weight %):

8-12% acrylonitrile  
3-8% butyl acrylate  
3-5% ethyl acrylate  
3-8% methyl acrylate  
65-80% methyl methacrylate  
15-30% styrene

This is a very specific polymer which has not been patented or even tried to be patented. However, I think it's commercially available as an acrylic multipolymer from Cyro Industries. The composition might be proprietary. Terpolymers of the above monomers are very common. Please supply only reference hits that have at least five of the monomers in a multipolymer. Thank you!

Comments=

RONESI 10/072162 6/8/04 Page 1

=> FILE REG

FILE 'REGISTRY' ENTERED AT 13:48:52 ON 08 JUN 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 7 JUN 2004 HIGHEST RN 690625-61-7  
DICTIONARY FILE UPDATES: 7 JUN 2004 HIGHEST RN 690625-61-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> FILE HCPLUS

FILE 'HCPLUS' ENTERED AT 13:48:58 ON 08 JUN 2004  
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FILE COVERS 1907 - 8 Jun 2004 VOL 140 ISS 24  
FILE LAST UPDATED: 7 Jun 2004 (20040607/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L15

L4	66969 SEA FILE=REGISTRY ABB=ON	100-42-5/CRN
L5	66209 SEA FILE=REGISTRY ABB=ON	80-62-6/CRN
L7	17784 SEA FILE=REGISTRY ABB=ON	107-13-1/CRN
L9	41563 SEA FILE=REGISTRY ABB=ON	141-32-2/CRN
L11	18810 SEA FILE=REGISTRY ABB=ON	140-88-5/CRN
L13	11755 SEA FILE=REGISTRY ABB=ON	96-33-3/CRN
L14	3 SEA FILE=REGISTRY ABB=ON	L4 AND L5 AND L7 AND L9 AND L11 AND L13
L15	3 SEA FILE=HCPLUS ABB=ON	L14

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

Component numbers  
for the components  
of the polymer  
only 3 polymers in Registry  
with all 6 components,  
3 Chem. Ab. references  
1 am-eth. 2 solvents

=> D ALL HITSTR 1-3

YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:N

=> D ALL HITSTR 1-3 L15

L15 ANSWER 1 OF 3 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:13887 HCPLUS  
 DN 128:76670  
 ED Entered STN: 10 Jan 1998  
 TI Forming multilayer metallic coating with excellent decorativeness and smoothness  
 IN Kasari, Akira; Oda, Hiroaki; Endo, Mitsugu; Shimakawa, Mikio; Yokoyama, Tetsuya  
 PA Kansai Paint Co., Ltd., Japan; Kasari, Akira; Oda, Hiroaki; Endo, Mitsugu; Shimakawa, Mikio; Yokoyama, Tetsuya  
 SO PCT Int. Appl., 52 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 IC ICM B05D001-36  
 ICS B05D005-06; C25D013-00  
 CC 42-10 (Coatings, Inks, and Related Products)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9747396 W: GB, JP, KR, US GB 2318312 GB 2318312 US 6165621	A1 A1 B2 A	19971218 19980422 19991013 20001226	WO 1997-JP1885 GB 1998-2670 US 1998-239	19970603 19970603 19980206
PRAI	JP 1996-153518 JP 1996-227906 WO 1997-JP1885	A A W	19960614 19960829 19970603		
AB	The title process is carried out by the three-coating system wherein (A) a first organic solvent-base, thermosetting metallic base coating composition having substrate-hiding properties, containing a neutralization product of a carboxylated resin having acid value 5-100, an amino resin, and a metallic pigment, and having, in the form of a 15 µm-thick cured coating, a transmittance ≤3 for light having a wavelength 400-700 nm, (B) a second transparent aqueous thermosetting base coating composition having, in the form of a 15 µm-thick cured coating, transmittance 10-95 for light having a wavelength 400-700 nm, and (C) an organic solvent-base thermosetting clear coating composition are successively applied onto a metallic object coated with a cationic electrocoating agent. A first coating was formed from Me methacrylate-Et acrylate-Bu acrylate-hydroxyethyl methacrylate-acrylic acid copolymer dimethylaminoethanol salt (I) 140, Cymel-370 34, Alpaste 891K 20, and iso-Pr alc. 129 parts; a second coating from I 50, neopentyl glycol-trimethylolpropane-phthalic anhydride-adipic acid-trimellitic anhydride copolymer dimethylaminoethanol salt 50, Me methacrylate-styrene-Bu acrylate-2-hydroxyethyl acrylate-1,6-hexanediol diacrylate-methacrylic acid-2-ethylhexyl acrylate copolymer dimethylaminoethanol salt 100, Cymel 34, Blue G316 5, and deionized water 220 parts; a clear third coating from 57 parts styrene-Bu				

acrylate-2-ethylhexyl acrylate-hydroxyethyl acrylate copolymer solution, 50 parts polymer obtained by polymerizing styrene, acrylonitrile, Me methacrylate, Me acrylate, Bu acrylate, 2-hydroxyethyl methacrylate, and acrylic acid in a U-Van 28-60 solution, 30 parts Cymel 303, 25% dodecylbenzensulfonic acid solution 4, and BYK-300 0.5 part.

ST acrylic aminoplast multilayer metallic coating

IT Polyesters, uses  
Polyesters, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-aminoplast-; forming multilayer metallic coating with excellent decorativeness and smoothness)

IT Aminoplasts  
Aminoplasts  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyester-; forming multilayer metallic coating with excellent decorativeness and smoothness)

IT Aminoplasts  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic; forming multilayer metallic coating with excellent decorativeness and smoothness)

IT Coating materials  
(multilayer; forming multilayer metallic coating with excellent decorativeness and smoothness)

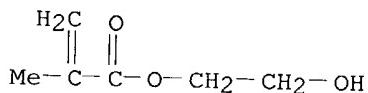
IT 200625-97-4P, Butyl acrylate-ethyl acrylate-methyl methacrylate-hydroxyethyl methacrylate-acrylic acid-melamine-formaldehyde copolymer dimethylaminoethanol salt 200625-99-6P, Neopentyl glycol-trimethylolpropane-phthalic anhydride-adipic acid-trimellitic anhydride-melamine-formaldehyde copolymer dimethylaminoethanol salt 200626-01-3P, Styrene-1,6-hexanediol diacrylate-methacrylic acid-butyl acrylate-ethyl acrylate-methyl methacrylate-2-hydroxyethyl methacrylate-acrylic acid-Neopentyl glycol-trimethylolpropane-phthalic anhydride-adipic acid-trimellitic anhydride-melamine-formaldehyde copolymer dimethylaminoethanol salt 200626-02-4P, Styrene-acrylonitrile-methyl methacrylate-methyl acrylate-butyl acrylate-2-hydroxyethyl methacrylate-acrylic acid-melamine-formaldehyde-ethyl acrylate copolymer  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(forming multilayer metallic coating with excellent decorativeness and smoothness)

IT 200626-02-4P, Styrene-acrylonitrile-methyl methacrylate-methyl acrylate-butyl acrylate-2-hydroxyethyl methacrylate-acrylic acid-melamine-formaldehyde-ethyl acrylate copolymer  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(forming multilayer metallic coating with excellent decorativeness and smoothness)

RN 200626-02-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, formaldehyde, methyl 2-methyl-2-propenoate, methyl 2-propenoate, 2-propenenitrile, 2-propenoic acid and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

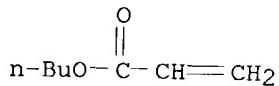
CRN 868-77-9  
CMF C<sub>6</sub> H<sub>10</sub> O<sub>3</sub>



*X extra component*

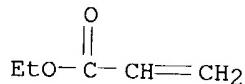
CM 2

CRN 141-32-2  
CMF C<sub>7</sub> H<sub>12</sub> O<sub>2</sub>



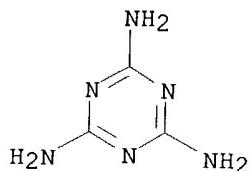
CM 3

CRN 140-88-5  
CMF C<sub>5</sub> H<sub>8</sub> O<sub>2</sub>



CM 4

CRN 108-78-1  
CMF C<sub>3</sub> H<sub>6</sub> N<sub>6</sub>



*X extra*

CM 5

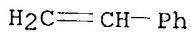
CRN 107-13-1  
CMF C<sub>3</sub> H<sub>3</sub> N



RONESI 10/072162 6/8/04 Page 5

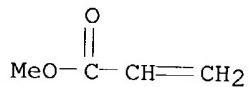
CM 6

CRN 100-42-5  
CMF C8 H8



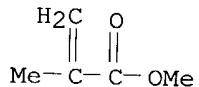
CM 7

CRN 96-33-3  
CMF C4 H6 O2



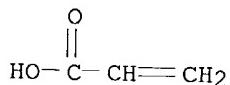
CM 8

CRN 80-62-6  
CMF C5 H8 O2



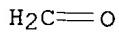
CM 9

CRN 79-10-7  
CMF C3 H4 O2



CM 10

CRN 50-00-0  
CMF C H2 O



L15 ANSWER 2 OF 3 HCPLUS COPYRIGHT 2004 ACS on STN

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

AN 1997:537607 HCAPLUS  
DN 127:150176  
ED Entered STN: 23 Aug 1997  
TI Aqueous dispersions for formaldehyde free print binders, manufacture thereof, and pigment printing mixtures containing the same  
IN Shah, Pravinchandra Kantilal; Panchmatia, Pankaj Rughnath  
PA The B.F. Goodrich Company, USA; Noveon IP Holdings Corp.  
SO Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM D06P001-52

ICS D06P001-667

CC 40-6 (Textiles and Fibers)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI EP 783051	A2	19970709	EP 1996-120977	19961228
EP 783051	A3	19980819		
EP 783051	B1	20040512		

R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL,  
PT, SE

US 5969018	A	19991019	US 1996-583261	19960105
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PRAI US 1996-583261 A 19960105

AB The title dispersions contain 0.1-15%  $\geq 1$  phosphate ester and a copolymer (a) 0.1-15% dicarboxylic acid(s), (b) 0.1-10%  $R_1R_2C:C(R_3)X(R_4)nY$  ( $R_1, R_2, R_3 = H, Me; R_4 = C1-4 alkyl; n = 0, 1; X = H, carboxyl, Ph, aryl, alkyl, alkaryl of 1-30 C atoms; Y = OH, NH_2; R_5 = H, C1-20 alkyl, aryl$ ), and (c)  $\geq 80\%$  backbone monomers. A copolymer prepared from itaconic acid 2, 2-hydroxyethyl acrylate 2, Et acrylate 95, and acrylamide 1% in the presence of Dextrol OC-15 phosphate emulsifier was used in pigment (Acramine Blue 3GNE) print pastes for printing 65:35 polyester/cotton blend sheeting fabric with good washfastness.

ST print binder formaldehyde free polymer

IT Binders

Emulsifying agents

Textile printing

(aqueous dispersions for formaldehyde free print binders, manufacture thereof,

and pigment printing mixts. containing the same)

IT Textiles

(cotton, polyester blends; aqueous dispersions for formaldehyde free print binders, manufacture thereof, and pigment printing mixts. containing the same)

IT Polyester fibers, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(fabrics, cotton blends; aqueous dispersions for formaldehyde free print binders, manufacture thereof, and pigment printing mixts. containing the same)

IT 75268-82-5P, 2-Hydroxyethyl acrylate-itaconic acid-butyl acrylate-styrene copolymer 144907-84-6P, Itaconic acid-2-hydroxyethyl acrylate-ethyl acrylate-acrylamide copolymer 193073-71-1P, Itaconic acid-2-hydroxyethyl acrylate-ethyl acrylate copolymer 193073-76-6P, 2-Hydroxyethyl acrylate-ethyl acrylate-itaconic acid-butyl acrylate-styrene-acrylamide copolymer 193073-81-3P, 2-Hydroxyethyl acrylate-itaconic acid-butyl acrylate-styrene-acrylamide copolymer 193073-87-9P, 2-Hydroxyethyl acrylate-itaconic acid-methyl acrylate-ethyl acrylate-butyl acrylate-2-ethylhexyl acrylate-acrylonitrile-styrene-methyl methacrylate

copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(aqueous dispersions for formaldehyde free print binders, manufacture thereof,

and pigment printing mixts. containing the same)

IT 51811-79-1, Dextrol OC-15 51811-79-1, Dextrol OC 22

RL: NUU (Other use, unclassified); USES (Uses)

(emulsifier; aqueous dispersions for formaldehyde free print binders, manufacture thereof, and pigment printing mixts. containing the same)

IT 193073-87-9P, 2-Hydroxyethyl acrylate-itaconic acid-methyl acrylate-ethyl acrylate-butyl acrylate-2-ethylhexyl acrylate-acrylonitrile-styrene-methyl methacrylate copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(aqueous dispersions for formaldehyde free print binders, manufacture thereof,

and pigment printing mixts. containing the same)

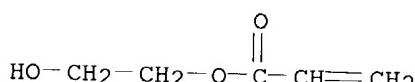
RN 193073-87-9 HCPLUS

CN Butanedioic acid, methylene-, polymer with butyl 2-propenoate, ethenylbenzene, 2-ethylhexyl 2-propenoate, ethyl 2-propenoate, 2-hydroxyethyl 2-propenoate, methyl 2-methyl-2-propenoate, methyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 818-61-1

CMF C5 H8 O3

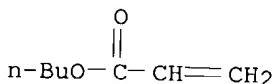


*extra*

CM 2

CRN 141-32-2

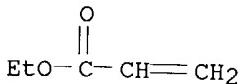
CMF C7 H12 O2



CM 3

CRN 140-88-5

CMF C5 H8 O2



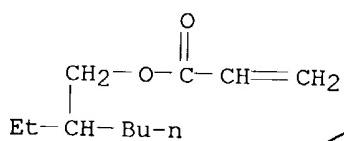
CM 4

CRN 107-13-1  
CMF C3 H3 N



CM 5

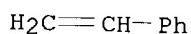
CRN 103-11-7  
CMF C11 H20 O2



eptra

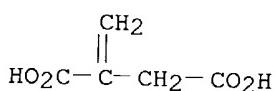
CM 6

CRN 100-42-5  
CMF C8 H8



CM 7

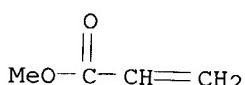
CRN 97-65-4  
CMF C5 H6 O4



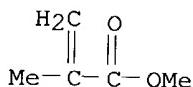
eptra

CM 8

CRN 96-33-3  
CMF C4 H6 O2



CM 9

CRN 80-62-6  
CMF C5 H8 O2

L15 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1977:602526 HCAPLUS  
 DN 87:202526  
 ED Entered STN: 12 May 1984  
 TI Gas permeation-resistant transparent resins for packaging materials  
 IN Sakauchi, Takashi; Inoue, Takeshi; Amano, Hirotoshi; Sato, Katsuji  
 PA Kanegafuchi Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC C08F279-02  
 CC 36-3 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 52043897	A2	19770406	JP 1975-119911	19751003
	JP 59017727	B4	19840423		
PRAI	JP 1975-119911		19751003		

AB Gas permeation-resistant transparent resin compns. useful as packaging materials were prepared by polymerizing >200 parts monomer mixts. of 60-80% acrylonitrile and 20-40% unsatd. carboxylates in the presence of premixts. of 100 parts diene rubber derived from 50-100% of conjugated dienes and 0-50% acrylonitrile, unsatd. carboxylates, and (or) aromatic vinyl compds. and 20-200 parts monomer mixts. of 30-60% acrylonitrile and 40-70% unsatd. carboxylates and(or) aromatic vinyl compds. Thus, 10 parts of a rubber latex derived from water 200.0, butadiene 80.0, styrene 15.0, Bu acrylate 5.0, divinylbenzene 0.5, Na oleate 3.0, di-Na ethylenediaminetetraacetate (I) 0.001, FeSO4.7H2O 0.005, Na formaldehydesulfoxylate 0.1, p-menthane hydroperoxide 0.1, and tert-dodecyl mercaptan 0.25 part was heated 1 h at 60° with water 200.0, acrylonitrile 2.0, and Bu acrylate 3.0 parts, and heated 10 h at 60° with acrylonitrile 61.0, Me acrylate 24.0, lauryl mercaptan 2.0, I 0.005, HCl 0.1, K2S2O8 0.04, and a phosphate emulsifier 2.0 parts to give a powdered resin [59493-30-0], which was pelletized and injection molded at 220° to give a test piece with Izod impact strength 11.5 kg.cm/cm<sup>2</sup>, Vicat softening temperature 75° (ASTM D-1525-58T), flow (210°) 1.72 x 10-2 cm<sup>3</sup>/s, and O permeability 0.9 x 10-12 cm<sup>3</sup>-cm/cm<sup>2</sup>-s-10mm, compared with 11.2, 74, 0.80 x 10-2, and 0.8 x 10-12, resp. for a similar polymer prepared without premixing the rubber with monomers.

ST packaging material gas nonpermeability; diene rubber latex grafting; acrylin resin packaging material

IT Packaging materials  
 (for food, acrylic graft copolymer films as, oxygen

IT permeation-resistant and transparent)  
IT Polymers, uses and miscellaneous  
RL: USES (Uses)  
(graft, packaging materials, for food)  
IT Food  
(packaging materials for, graft acrylic polymers as)  
IT 59493-30-0 **63453-85-0** 63453-86-1  
RL: USES (Uses)  
(graft, packaging films, oxygen permeation-resistant and transparent)  
IT **63453-85-0**  
RL: USES (Uses)  
(graft, packaging films, oxygen permeation-resistant and transparent)  
RN 63453-85-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene,  
butyl 2-propenoate, diethenylbenzene, ethenylbenzene, 2-ethylhexyl  
2-propenoate, ethyl 2-propenoate, methyl 2-propenoate and 2-propenenitrile  
(9CI) (CA INDEX NAME)

CM 1

CRN 1321-74-0  
CMF C10 H10  
CCI IDS

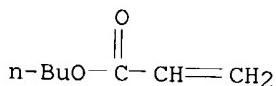
*extra*



2 [ D1 - CH=CH2 ]

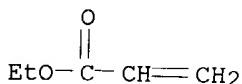
CM 2

CRN 141-32-2  
CMF C7 H12 O2



CM 3

CRN 140-88-5  
CMF C5 H8 O2



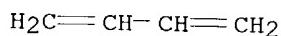
CM 4

CRN 107-13-1  
CMF C3 H3 N



CM 5

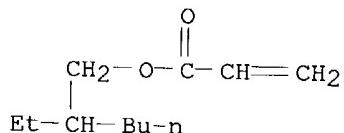
CRN 106-99-0  
CMF C4 H6



*extra*

CM 6

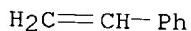
CRN 103-11-7  
CMF C11 H20 O2



*extra*

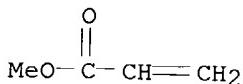
CM 7

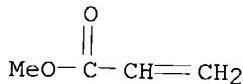
CRN 100-42-5  
CMF C8 H8



CM 8

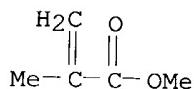
CRN 96-33-3  
CMF C4 H6 O2





CM 9

CRN 80-62-6  
CMF C5 H8 O2



=> D HIS

(FILE 'HOME' ENTERED AT 13:11:57 ON 08 JUN 2004)

FILE 'HCAPLUS' ENTERED AT 13:12:07 ON 08 JUN 2004  
E US20020167112/PN

L1 1 S E3  
SEL RN

FILE 'REGISTRY' ENTERED AT 13:13:32 ON 08 JUN 2004  
L2 8 S E1-E8  
L3 2 S L2 AND PMS/CI  
L4 66969 S 100-42-5/CRN  
L5 66209 S 80-62-6/CRN  
E ACRYLONITRILE/CN  
L6 1 S E3  
L7 17784 S 107-13-1/CRN  
E BUTYL ACRYLATE/CN  
L8 1 S E3  
L9 41563 S 141-32-2/CRN  
E ETHYLE ACRYLATE/CN  
E ETHYL ACRYLATE/CN  
L10 1 S E3  
L11 18810 S 140-88-5/CRN  
E METHYL ACRYLATE/CN  
L12 1 S E3  
L13 11755 S 96-33-3/CRN  
L14 3 S L4 AND L5 AND L7 AND L9 AND L11 AND L13

FILE 'HCAPLUS' ENTERED AT 13:23:37 ON 08 JUN 2004  
L15 3 S L14

FILE 'REGISTRY' ENTERED AT 13:24:15 ON 08 JUN 2004  
L16 44 S L4 AND L5 AND L7 AND L9 AND L11  
L17 3 S L16 AND 5/NC  
L18 11 S L16 AND 6/NC

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L19      35 S L4 AND L5 AND L7 AND L9 AND L13
L20      0 S L19 AND 5/NC
L21      1 S L19 AND 6/NC
L22      6 S L5 AND L7 AND L9 AND L11 AND L13
L23      0 S L22 AND 5-6/NC
L24      6 S L4 AND L7 AND L9 AND L11 AND L13
L25      1 S L24 AND 5-6/NC
L26      0 S L4 AND L5 AND L9 AND L11 AND L12
L27      0 S L4 AND L5 AND L7 AND L11 AND L12
L28      36 S L4 AND L5 AND L9 AND L11 AND L13
L29      5 S L28 AND 5-6/NC
L30      7 S L4 AND L5 AND L7 AND L11 AND L13
L31      2 S L30 AND 5-6/NC
L32      23 S L17 OR L18 OR L20 OR L21 OR L23 OR L25 OR L29 OR L31
        SET COST OFF

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FILE 'REGISTRY' ENTERED AT 13:48:52 ON 08 JUN 2004

FILE 'HCAPLUS' ENTERED AT 13:48:58 ON 08 JUN 2004

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L5      66209 SEA FILE=REGISTRY ABB=ON 80-62-6/CRN
L7      17784 SEA FILE=REGISTRY ABB=ON 107-13-1/CRN
L9      41563 SEA FILE=REGISTRY ABB=ON 141-32-2/CRN
L11     18810 SEA FILE=REGISTRY ABB=ON 140-88-5/CRN
L13     11755 SEA FILE=REGISTRY ABB=ON 96-33-3/CRN
L16     44 SEA FILE=REGISTRY ABB=ON L4 AND L5 AND L7 AND L9 AND L11
L17     3 SEA FILE=REGISTRY ABB=ON L16 AND 5/NC
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L19     35 SEA FILE=REGISTRY ABB=ON L4 AND L5 AND L7 AND L9 AND L13
L20     0 SEA FILE=REGISTRY ABB=ON L19 AND 5/NC
L21     1 SEA FILE=REGISTRY ABB=ON L19 AND 6/NC
L22     6 SEA FILE=REGISTRY ABB=ON L5 AND L7 AND L9 AND L11 AND L13
L23     0 SEA FILE=REGISTRY ABB=ON L22 AND 5-6/NC
L24     6 SEA FILE=REGISTRY ABB=ON L4 AND L7 AND L9 AND L11 AND L13
L25     1 SEA FILE=REGISTRY ABB=ON L24 AND 5-6/NC
L28     36 SEA FILE=REGISTRY ABB=ON L4 AND L5 AND L9 AND L11 AND L13
L29     5 SEA FILE=REGISTRY ABB=ON L28 AND 5-6/NC
L30     7 SEA FILE=REGISTRY ABB=ON L4 AND L5 AND L7 AND L11 AND L13
L31     2 SEA FILE=REGISTRY ABB=ON L30 AND 5-6/NC
L32     23 SEA FILE=REGISTRY ABB=ON L17 OR L18 OR L20 OR L21 OR L23 OR
        L25 OR L29 OR L31

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*26 CA references with 5 of the  
polymers*

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=> S L32
L33      26 L32

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=> D L33 ALL 1-26 HITSTR

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L33 ANSWER 1 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:919296 HCAPLUS
DN 136:56386
ED Entered STN: 21 Dec 2001
TI Cover sheet for solar cell
IN Manabe, Kenji
PA Sumitomo Chemical Co., Ltd., Japan

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SO Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM H01L031-052

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001352091	A2	20011221	JP 2000-120543	20000421
PRAI	JP 2000-104439	A	20000406		
AB	The cover sheet is a mixture of a transparent resin and a fluorescent dye. The resin is preferably a Me methacrylate based resin, and the dye has a maximum absorption in wavelength range 370-600 nm and maximum emission in wavelength range 410-800 nm.				
ST	solar cell resin cover sheet fluorescent dye				
IT	Solar cells (cover sheets containing transparent resin and fluorescent dyes for solar cells)				
IT	9011-87-4, Methyl acrylate-methyl methacrylate copolymer 79869-59-3, Sumiplast yellow fl7g 100443-95-6, Lumogen f yellow 083 <b>205237-33-8</b> , Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer RL: DEV (Device component use); USES (Uses) (cover sheets containing transparent resin and fluorescent dyes for solar cells)				

IT **205237-33-8**, Allyl methacrylate-butyl acrylate-ethyl  
acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer  
RL: DEV (Device component use); USES (Uses)  
(cover sheets containing transparent resin and fluorescent dyes for solar cells)

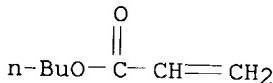
RN 205237-33-8 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and  
2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

CMF C7 H12 O2

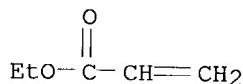


CM 2

CRN 140-88-5

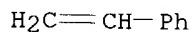
CMF C5 H8 O2

RONESI 10/072162 6/8/04 Page 16



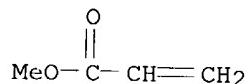
CM 3

CRN 100-42-5  
CMF C8 H8



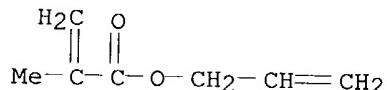
CM 4

CRN 96-33-3  
CMF C4 H6 O2



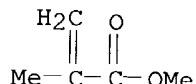
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2

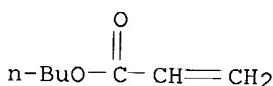


L33 ANSWER 2 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 2001:497412 HCPLUS  
DN 136:167746  
ED Entered STN: 11 Jul 2001  
TI Synthesis of acrylic resin for PU synthetic leather coloring agent

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

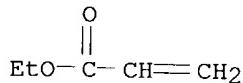
AU Wang, Xiaohang  
 CS Dandong Institute of Light Chemical Industry, Dandong, 118002, Peop. Rep. China  
 SO Pige Huagong (2001), 18(2), 18-19, 24  
 CODEN: PIHUFH; ISSN: 1004-8960  
 PB Dandong Qinghuagong Yanjiuyuan  
 DT Journal  
 LA Chinese  
 CC 35-4 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 38  
 AB The acrylic resin was synthesized from Me acrylate 5-10%, Et acrylate 5-10%, Bu acrylate 10-20%, Me methacrylate 20-30% and styrene 20-30% by solution polymerization with dibenzoyl peroxide (0.5-1.5%) as initiator in toluene (45-55%). The product had transparent appearance, good whiteness, and suitable viscosity, and can be used as medium or carrier in the manufacture of coloring agent for polyurethane (PU) synthetic leather.  
 ST acrylic resin coloring agent polyurethane synthetic leather  
 IT Polymerization  
     (solution; synthesis of acrylic resin for polyurethane synthetic leather coloring agent)  
 IT Coloring materials  
 Leather substitutes  
     (synthesis of acrylic resin for polyurethane synthetic leather coloring agent)  
 IT Polyurethanes, miscellaneous  
 RL: MSC (Miscellaneous)  
     (synthesis of acrylic resin for polyurethane synthetic leather coloring agent)  
 IT 396715-81-4P, Butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
     (synthesis of acrylic resin for polyurethane synthetic leather coloring agent)  
 IT 396715-81-4P, Butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
     (synthesis of acrylic resin for polyurethane synthetic leather coloring agent)  
 RN 396715-81-4 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate and methyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1  
 CRN 141-32-2  
 CMF C7 H12 O2



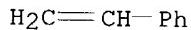
CM 2

CRN 140-88-5  
CMF C5 H8 O2



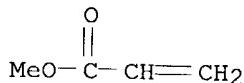
CM 3

CRN 100-42-5  
CMF C8 H8



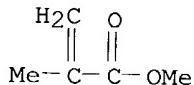
CM 4

CRN 96-33-3  
CMF C4 H6 O2



CM 5

CRN 80-62-6  
CMF C5 H8 O2



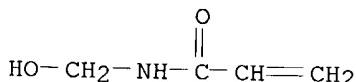
L33 ANSWER 3 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:897354 HCPLUS  
DN 134:327397  
ED Entered STN: 22 Dec 2000  
TI How to use styrene to modify acrylic adhesives  
AU Qiu, Li-gan  
CS Dep. Chem., Yancheng Teach. Coll., Jiangsu, 224002, Peop. Rep. China  
SO Huaxue Yu Nianhe (2000), (4), 171-172, 170  
CODEN: HYZHENG; ISSN: 1001-0017  
PB Huaxue Yu Nianhe Bianji Weiyuanhui

DT Journal  
LA Chinese  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 40  
AB This paper discusses how to use styrene to modify (meth)acrylate adhesives. With the proper formula chosen, the various elements affecting emulsion reactions were controlled and under the best technol. conditions. The cheap but good acrylic adhesives could be prepared for textile use.  
ST styrene acrylate adhesive prepn textile; methacrylate styrene adhesive  
prep textile  
IT Polymerization  
(emulsion; preparation and properties of styrene-modified acrylic adhesives)  
IT Adhesives  
(preparation and properties of styrene-modified acrylic adhesives)  
IT Textiles  
(preparation and properties of styrene-modified acrylic adhesives for textiles)  
IT 336615-48-6P, Acrylonitrile-butyl acrylate-ethyl acrylate-methyl methacrylate-N-methyloacrylamide-styrene copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation and properties of styrene-modified acrylic adhesives)  
IT 336615-48-6P, Acrylonitrile-butyl acrylate-ethyl acrylate-methyl methacrylate-N-methyloacrylamide-styrene copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation and properties of styrene-modified acrylic adhesives)  
RN 336615-48-6 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, N-(hydroxymethyl)-2-propenamide and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 924-42-5

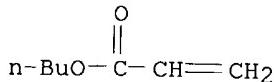
CMF C4 H7 N O2



CM 2

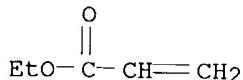
CRN 141-32-2

CMF C7 H12 O2



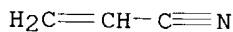
CM 3

CRN 140-88-5  
CMF C5 H8 O2



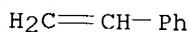
CM 4

CRN 107-13-1  
CMF C3 H3 N



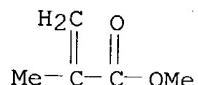
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 4 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1999:238594 HCPLUS  
DN 130:297599  
ED Entered STN: 19 Apr 1999  
TI Laminated, extruded plastic article  
IN Maekawa, Tomohiro  
PA Sumitomo Chemical Co., Ltd., Japan  
SO Ger. Offen., 12 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
IC ICM C08L033-10  
ICS C08L021-00; B29C047-06; B29D007-00  
CC 38-3 (Plastics Fabrication and Uses)

## FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19844716	A1	19990408	DE 1998-19844716	19980929
	TW 454028	B	20010911	TW 1998-87115616	19980918
	NL 1010198	A1	19990407	NL 1998-1010198	19980928
	NL 1010198	C2	19990525		
	JP 11165382	A2	19990622	JP 1998-277557	19980930
	CN 1221008	A	19990630	CN 1998-120825	19980930
PRAI	JP 1997-270105	A	19971002		

AB The title articles, containing MMA resins, having very small thickness variations, and which can be subjected to a 2nd thermal forming, are prepared by subjecting MMA resins containing 0-50 phr dispersed rubbery polymer and dispersions of 1-50 parts insol. MMA resin (weight-average particle size 1-100  $\mu\text{m}$ ) in 100 parts MMA resin and 0-70 parts rubbery polymer to multilayer extrusion. A mixture of 100 parts PMMA and 10 parts rubbery 17.3:689:14:326:150:162 allyl methacrylate-Bu acrylate-Et acrylate-Me acrylate-MMA-styrene copolymer and a mixture of 100 parts PMMA, 14 parts I, and 9 parts crosslinked 2:17:380 ethylene glycol dimethacrylate-Me acrylate-MMA copolymer particles (particle size 33  $\mu\text{m}$ ) was co-extruded (thickness 0.1-1.8-0.1 mm) to give a maximum thickness variation of 0.714 mm when held at 140°.

ST extrusion methacrylate polymer laminate; acrylate copolymer laminate extrusion; styrene copolymer laminate extrusion; allyl methacrylate copolymer laminate extrusion; ethylene glycol dimethacrylate copolymer laminate

IT Extrusion of plastics and rubbers  
(laminated, extruded plastic article)

IT Laminated plastics, uses  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(laminated, extruded plastic article)

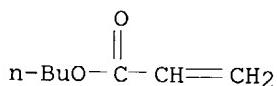
IT 9011-14-7 36956-01-1D, Ethylene glycol dimethacrylate-methyl acrylate-methyl methacrylate copolymer, crosslinked **223265-65-4**, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(blends; laminated, extruded plastic article)

IT **223265-65-4**, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(blends; laminated, extruded plastic article)

RN 223265-65-4 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

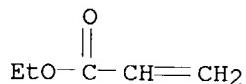
CM 1

CRN 141-32-2  
CMF C7 H12 O2



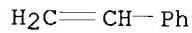
CM 2

CRN 140-88-5  
CMF C5 H8 O2



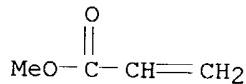
CM 3

CRN 100-42-5  
CMF C8 H8



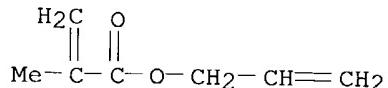
CM 4

CRN 96-33-3  
CMF C4 H6 O2



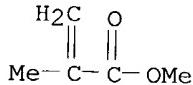
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 5 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1999:238593 HCPLUS  
 DN 130:297598  
 ED Entered STN: 19 Apr 1999  
 TI Light-diffusing laminated plastic sheet  
 IN Maekawa, Tomohiro; Niihama, Ehime  
 PA Sumitomo Chemical Co., Ltd., Japan  
 SO Ger. Offen., 10 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC ICM C08L033-10  
 ICS C08L021-00; C08L025-04; C08K003-26; B29C047-06; B29D007-00  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 37, 39

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19844657	A1	19990408	DE 1998-19844657	19980929
	JP 11105207	A2	19990420	JP 1997-270104	19971002
	TW 520388	B	20030211	TW 1998-87115945	19980925
	NL 1010197	A1	19990407	NL 1998-1010197	19980928
	NL 1010197	C2	19990525		
	CN 1220283	A	19990623	CN 1998-120785	19980929
	US 6042945	A	20000328	US 1998-163191	19980930
	JP 2004090626	A2	20040325	JP 2003-190853	20030703
PRAI	JP 1997-270104	A	19971002		

AB A title sheet, useful as light-diffusing lamp and liquid-crystal display cover, etc., comprises (A) a Me methacrylate or styrene (co)polymer base layer optionally blended with ≤30% of an elastomer and containing ≤10% of dispersed solid particles (particle size 1-10 μm), laminated with (B) a layer comprising 3-70 parts of uniform dispersion of an elastomer in 100 parts of a PMMA or polystyrene resin. A typical laminate comprised 2 1,8-mm-thick outer layers (A) made of 100 parts Sumipex EXA containing 14 parts CaCO<sub>3</sub> (particle size 3 μm) coextruded with an 1.8-mm-thick inner layer (B) of acrylic copolymer rubber manufactured by copolymn. of 3 pairs of monomers: allyl methacrylate with Me methacrylate, Bu acrylate with styrene and Me acrylate with Et acrylate, in 3 successive steps.

ST light diffusing laminated plastic sheet manuf; PMMA laminate acrylic rubber light diffusing sheet; calcium carbonate dispersion polymethacrylate laminate rubber light diffusing sheet

IT Acrylic rubber  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (allyl methacrylate-Bu acrylate-Et acrylate-Me acrylate-Me methacrylate-styrene; light-diffusing laminated plastic sheet comprising acrylic rubber inner layer and methacrylate polymer outer layers)

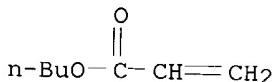
IT Laminated plastics, uses

IT RL: DEV (Device component use); USES (Uses)  
(light-diffusing laminated plastic sheet comprising acrylic rubber  
inner layer and methacrylate polymer outer layers)  
IT 9011-14-7, Sumipex EXA  
RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)  
(light-diffusing laminated plastic sheet comprising acrylic rubber  
inner layer and methacrylate polymer outer layers)  
IT 471-34-1, Calcium carbonate, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(particles 3-5  $\mu\text{m}$ ; light-diffusing laminated plastic sheet  
comprising acrylic rubber inner layer and methacrylate polymer outer  
layers containing)  
IT 205237-33-8P, Allyl methacrylate-Butyl acrylate-Ethyl  
acrylate-Methyl acrylate-Methyl methacrylate-Styrene graft copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(rubber; light-diffusing laminated plastic sheet containing inner acrylic  
rubber layer)  
IT 205237-33-8P, Allyl methacrylate-Butyl acrylate-Ethyl  
acrylate-Methyl acrylate-Methyl methacrylate-Styrene graft copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(rubber; light-diffusing laminated plastic sheet containing inner acrylic  
rubber layer)  
RN 205237-33-8 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and  
2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

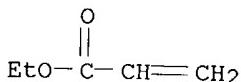
CMF C7 H12 O2



CM 2

CRN 140-88-5

CMF C5 H8 O2

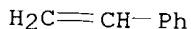


CM 3

CRN 100-42-5

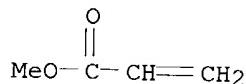
RONESI 10/072162 6/8/04 Page 25

CMF C8 H8



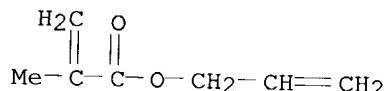
CM 4

CRN 96-33-3  
CMF C4 H6 O2



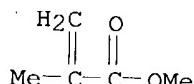
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1998:361061 HCAPLUS  
DN 129:123313  
ED Entered STN: 13 Jun 1998  
TI Impact-resistant methacrylic resin compositions with good moldability and processability  
IN Nokura, Koichi; Hoshiba, Takao; Otani, Mitsuo  
PA Kuraray Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08L033-12  
ICS C08L051-00

CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

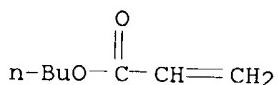
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10152595	A2	19980609	JP 1996-325959	19961121
PRAI	JP 1996-325959		19961121		
AB Title compns. comprise (1) 90-99 parts impact-resistant methacrylic resins from (a) multilayer polymers prepared by grafting alkyl acrylate-based rubber layers and alkyl methacrylate-based polymer layers and/or (b) multilayer polymers prepared by grafting conjugated diolefin/alkyl acrylate-based rubber layers and alkyl methacrylate-based polymer layers and (2) 1-10 parts methacrylic polymers [viscosity-average mol. weight 300,000-3,000,000] prepared by emulsion-polymerizing monomer mixts. containing 80-100% ≥1 C1-4 alkyl methacrylates, 0-20% ≥1 C1-8 alkyl acrylates, and 0-10% other unsatd. monomers. Thus, a composition containing a 3-layer polymer [composed of 1st layer from Me methacrylate (I)/Et acrylate/allyl methacrylate (II) (24/1/0.05) mixture, 2nd layer from Bu acrylate/styrene/II (41.3/8.7/1) mixt, and 3rd layer from I/Me acrylate (III) (24/1) mixture] 60, a rigid polymer (prepared from 94 parts I and 6 parts III) 35, I homopolymer 5, and Parapet EH 100 parts showed good impact resistance, moldability, and processability.					
ST impact resistance methacrylic resin blend; moldability processability methacrylic resin blend					
IT Impact-resistant materials (impact-resistant methacrylic resin compns. with good moldability and processability)					
IT Polymer blends RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (impact-resistant methacrylic resin compns. with good moldability and processability)					
IT 9010-88-2P, Ethyl acrylate-methyl methacrylate copolymer 107052-86-8P, Allyl methacrylate-butyl acrylate-methyl methacrylate graft copolymer 110254-00-7P, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer 150732-38-0P, Allyl methacrylate-butyl acrylate-1,3-butylene glycol dimethacrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer 156697-84-6P, Butadiene-butyl acrylate-methyl acrylate-methyl methacrylate graft copolymer 205237-33-8P, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (impact-resistant methacrylic resin compns. with good moldability and processability)					
IT 9011-14-7, Parapet EH 9011-87-4, Parapet HR-L RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (impact-resistant methacrylic resin compns. with good moldability and processability)					
IT 205237-33-8P, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (impact-resistant methacrylic resin compns. with good moldability and processability)					

RN 205237-33-8 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and  
2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

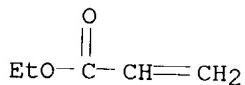
CM 1

CRN 141-32-2  
CMF C7 H12 O2



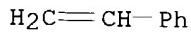
CM 2

CRN 140-88-5  
CMF C5 H8 O2



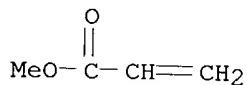
CM 3

CRN 100-42-5  
CMF C8 H8



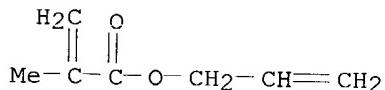
CM 4

CRN 96-33-3  
CMF C4 H6 O2

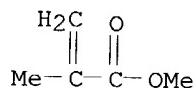


CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2

L33 ANSWER 7 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:358361 HCPLUS  
 DN 129:82710  
 ED Entered STN: 13 Jun 1998  
 TI A study on correlation between monomer compositions and physical properties of acrylic sizes  
 AU Kim, Joon Ho; Yu, Jeung Mog; Park, Chan Jun  
 CS School Textiles, Yeungnam University, Kyongsan, S. Korea  
 SO Han'guk Somyu Konghakhoechi (1998), 35(3), 174-181  
 CODEN: HSKCDQ; ISSN: 1225-1089  
 PB Korean Fiber Society  
 DT Journal  
 LA Korean  
 CC 40-7 (Textiles and Fibers)  
 AB The expts. were carried out on the minute control of monomer composition in acrylic sizes, which were used in manufacturing plant of com. acrylic sizes. The acrylic sizes were synthesized by solution and emulsion polymerization, and the effects of composition change were investigated. With the control in composition of acrylic monomer, it was possible to synthesize acrylic sizes with available phys. properties within the Tg range of 15 °C. As the mole fraction of Et acrylate monomer increased, swelling property of acrylic size films increased, but the pick-up property of the size was not changed. From viscoelasticity measurements, it was estimated that the rheol. property stability at higher temperature sizing process was higher for the solution-polymerized sizes than for the emulsion-polymerized ones. As size pick-up increased, the phys. properties of the sized yarn were improved and the process availability of composition-controlled acrylic sizes was sufficient.  
 ST acrylic size textile compn property relationship; finish spinning oil compatibility acrylic size; swelling viscoelasticity glass transition acrylic size  
 IT Glass transition  
 Sizes (agents)  
 Swelling, physical  
 Viscoelasticity  
 (correlation between monomer compns. and phys. properties of acrylic sizes)

IT 209284-90-2, Acrylic acid-acrylonitrile-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(emulsion-polymerized; correlation between monomer compns. and phys. properties of acrylic sizes)

IT 36355-51-8, Acrylic acid-acrylonitrile-ethyl acrylate-methyl methacrylate copolymer  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(solution-polymerized; correlation between monomer compns. and phys. properties of acrylic sizes)

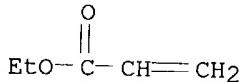
IT 209284-90-2, Acrylic acid-acrylonitrile-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(emulsion-polymerized; correlation between monomer compns. and phys. properties of acrylic sizes)

RN 209284-90-2 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate, 2-propenenitrile and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 140-88-5  
CMF C5 H8 O2



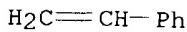
CM 2

CRN 107-13-1  
CMF C3 H3 N



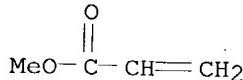
CM 3

CRN 100-42-5  
CMF C8 H8



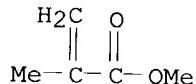
CM 4

CRN 96-33-3  
CMF C4 H6 02



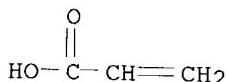
CM 5

CRN 80-62-6  
CMF C5 H8 O2



CM 6

CRN 79-10-7  
CMF C3 H4 O2



L33 ANSWER 8 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:197955 HCAPLUS  
 DN 128:258085  
 ED Entered STN: 06 Apr 1998  
 TI Impact-resistant methacrylic polymer compositions with good moldability  
 and processability  
 IN Otani, Mitsuo; Nokura, Koichi  
 PA Kuraray Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08L033-12  
 ICS C08L051-06  
 CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10081805	A2	19980331	JP 1996-253918	19960904
PRAI JP 1996-253918		19960904		
AB Title compns. comprise 0-900 parts methacrylic polymers and 100 parts mixts. from (1) 50-98% multilayer polymers composed of (a) ≥1 flexible polymer layers prepared by emulsion-polymerizing 50-99.9% ≥1				

C1-18 alkyl acrylates (AA), 0.1-5% multifunctional crosslinking monomers (MCM) and/or multifunctional graft monomers (MGM), and 0-49.9% other unsatd. monomers (UM) or by emulsion-polymerizing 20-100% conjugated diolefins, 0-80% ≥1 C1-8 AA, 0-5% MCM and/or MGM, and 0-50% UM and (b) ≥1 rigid polymer layers prepared by emulsion-polymerizing 50-100% ≥1 C1-4 alkyl methacrylates (AM), 0-5% MCM and/or MGM, and 0-50% UM to have a rigid polymer outermost layer from 50-100% ≥1 C1-4 AM and 0-50% UM and (2) 2-50% rigid 3-layer polymers from (c) 1-20% 1st layer prepared by emulsion-polymerizing 40-90% ≥1 C1-4 AM, 10-60% ≥1 C1-8 AA, and 0-20% UM in the presence of 0.1-2% chain-transfer agents (CTA), (d) 1-40% 2nd layer prepared by emulsion-polymerizing 80-100% ≥1 C1-4 AM, 0-20% ≥1 C1-8 AA, 0-1% MCM and/or MGM, and 0-20% UM in the presence of ≤0.1% CTA, and (e) 40-98% 3rd layer prepared by emulsion-polymerizing 50-100% ≥1 C1-4 AM, 0-20% ≥1 C1-8 AA, and 0-50% UM in the presence of 0.1-1% CTA. Thus, a composition containing a multilayer polymer [having 0.05:1:24 allyl methacrylate (I)-Et acrylate-Me methacrylate (II) copolymer layer, 1:41.3:8.7 I-Bu acrylate-styrene copolymer layer, and 1:24 Me acrylate (III)-II copolymer outermost layer] 70, a 3-layer polymer (having 2:4 III-II copolymer 1st layer, II homopolymer 2nd layer, and 4:66 III-II copolymer 3rd layer) 30, and Parapet EH Beads (methacrylic polymer) 200 parts was mixed and extruded to give an impact-resistant sheet with good moldability, and processability.

- ST impact resistance methacrylic polymer blend; moldability methacrylic resin blend; processability methacrylic resin blend; multilayer polymer methacrylic resin blend
- IT Impact-resistant materials  
(impact-resistant methacrylic polymer compns. with good moldability and processability)
- IT Polymer blends  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(impact-resistant methacrylic polymer compns. with good moldability and processability)
- IT 111-88-6, n-Octylmercaptopan  
RL: NUU (Other use, unclassified); USES (Uses)  
(chain-transfer agent; impact-resistant methacrylic polymer compns. with good moldability and processability)
- IT 9011-14-7, Parapet EH 9011-87-4, Parapet HR-L  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(impact-resistant methacrylic polymer compns. with good moldability and processability)
- IT 107052-86-8P, Allyl methacrylate-butyl acrylate-methyl methacrylate graft copolymer 110254-00-7P, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer 150732-38-0P 156697-84-6P, Butadiene-butyl acrylate-methyl acrylate-methyl methacrylate graft copolymer 205237-33-8P, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(multilayer; impact-resistant methacrylic polymer compns. with good moldability and processability)
- IT 113547-51-6P, Ethyl acrylate-methyl methacrylate graft copolymer 138128-39-9P, Methyl acrylate-methyl methacrylate graft copolymer 150408-81-4P, Butyl acrylate-methyl acrylate-methyl methacrylate graft

copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(three-layer; impact-resistant methacrylic polymer compns. with good moldability and processability)

IT 205237-33-8P, Allyl methacrylate-butyl acrylate-ethyl

acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(multilayer; impact-resistant methacrylic polymer compns. with good moldability and processability)

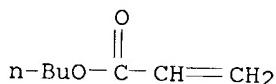
RN 205237-33-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

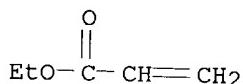
CMF C7 H12 O2



CM 2

CRN 140-88-5

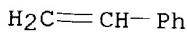
CMF C5 H8 O2



CM 3

CRN 100-42-5

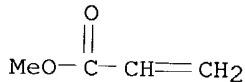
CMF C8 H8



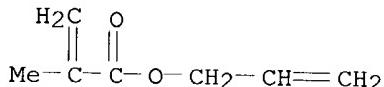
CM 4

CRN 96-33-3

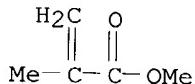
CMF C4 H6 O2



CM 5

CRN 96-05-9  
CMF C7 H10 O2

CM 6

CRN 80-62-6  
CMF C5 H8 O2

L33 ANSWER 9 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:178234 HCPLUS  
 DN 128:258046  
 ED Entered STN: 26 Mar 1998  
 TI Methacrylate polymer composition for extrudate with good impact resistance and good moldability  
 IN Otani, Mitsuo; Hoshiba, Takao; Nokura, Koichi  
 PA Kuraray Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08L051-00  
 ICS C08L033-10; C08F002-22; C08F002-38; C08F265-06; C08F285-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10072543	A2	19980317	JP 1996-325958	19961121
PRAI	JP 1996-195477		19960705		
AB	The composition comprises a mixture of a multilayer-structured acrylic polymer 30-99, a hard thermoplastic polymer 0-69, and a two layer-structured polymer 1-20%, and optionally, a methacrylic polymer. Thus, an extrudate having Izod impact strength 4.2 kg-cm/cm, heat distortion temp 93° and haze 1% was prepared from a mixture of a 3-layer-structured polymer latex of MMA-Et acrylate (I)-allyl methacrylate (II) copolymer/Bu				

acrylate-styrene-II copolymer/MMA-Me acrylate (III) copolymer 60,  
 two-layer-structured polymer of MMA-III copolymer/MMA-III copolymer 35, a  
 two-layer-structured polymer of MMA-I copolymer/PMMA 5 and Parapet EH 200  
 parts.

ST impact resistance methacrylate copolymer compn moldability; styrene  
 acrylate copolymer blend impact

IT Acrylic polymers, properties  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
 engineered material use); USES (Uses)  
 (core-shell, multilayer; methacrylate polymer composition for extrudate with  
 good impact resistance and good moldability)

IT Impact-resistant materials  
 (methacrylate polymer composition for extrudate with good impact resistance  
 and good moldability)

IT Polymer blends  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
 engineered material use); USES (Uses)  
 (methacrylate polymer composition for extrudate with good impact resistance  
 and good moldability)

IT 107052-86-8, Allyl methacrylate-butyl acrylate-methyl methacrylate graft  
 copolymer 110254-00-7, Allyl methacrylate-butyl acrylate-methyl  
 acrylate-methyl methacrylate-styrene graft copolymer 111768-67-3, Butyl  
 acrylate-methyl methacrylate graft copolymer 113547-51-6, Ethyl  
 acrylate-methyl methacrylate graft copolymer 138128-39-9 150732-38-0  
**156697-84-6 205237-33-8**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
 engineered material use); USES (Uses)  
 (core-shell, multilayer; methacrylate polymer composition for extrudate with  
 good impact resistance and good moldability)

IT 9011-14-7, Parapet EH 9011-87-4, Parapet HR-L  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
 engineered material use); USES (Uses)  
 (methacrylate polymer composition for extrudate with good impact resistance  
 and good moldability)

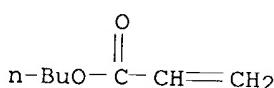
IT **205237-33-8**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
 engineered material use); USES (Uses)  
 (core-shell, multilayer; methacrylate polymer composition for extrudate with  
 good impact resistance and good moldability)

RN 205237-33-8 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
 2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and  
 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

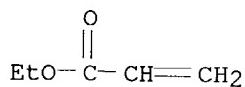
CM 1

CRN 141-32-2  
 CMF C7 H12 O2



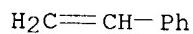
CM 2

CRN 140-88-5  
CMF C5 H8 O2



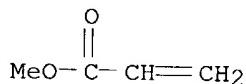
CM 3

CRN 100-42-5  
CMF C8 H8



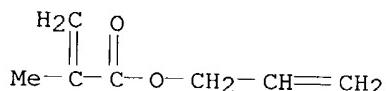
CM 4

CRN 96-33-3  
CMF C4 H6 O2



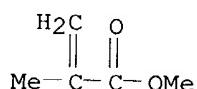
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 10 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1998:174004 HCPLUS  
DN 128:180925  
ED Entered STN: 25 Mar 1998  
TI Synthesis and application of self-crosslinking acrylate emulsion  
AU Fan, Heping; Yu, Jie; Chen, Zongyuan; Wang, Luoli  
CS Hubei Research Institute of Chemistry, Wuhan, 430074, Peop. Rep. China  
SO Zhongguo Jiaonianji (1998), 7(1), 1-4, 7  
CODEN: ZJIAEA; ISSN: 1004-2849  
PB Zhongguo Jiaonianji Bianjibu  
DT Journal  
LA Chinese  
CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 35, 38  
AB This article studied the self-crosslinking acrylate emulsion that contains more than two kinds of reactive groups and explored the conditions of synthesis and application. The emulsion can be used for adhering polyimide film and copper foil. The FPC (flexible printing circuit) substrates with the emulsion composition have good applied properties.  
ST acrylate emulsion self crosslinking prepn; polyimide copper foil acrylate emulsion adhesion  
IT Surfactants  
    (anionic; for synthesis of self-crosslinking acrylate emulsion)  
IT Adhesion, physical  
    (application of self-crosslinking acrylate emulsion for adhering polyimide-copper foil)  
IT Polyimides, miscellaneous  
RL: MSC (Miscellaneous)  
    (application of self-crosslinking acrylate emulsion for adhering polyimide-copper foil)  
IT Crosslinking agents  
    (effect on synthesis and application of self-crosslinking acrylate emulsion)  
IT Polymerization  
    (emulsion, seed; synthesis and application of self-crosslinking acrylate emulsion)  
IT Adhesives  
    (emulsion; application of self-crosslinking acrylate emulsion for adhering polyimide-copper foil)  
IT Emulsifying agents  
    (for synthesis of self-crosslinking acrylate emulsion)  
IT Surfactants  
    (nonionic; for synthesis of self-crosslinking acrylate emulsion)  
IT Crosslinking  
    (synthesis and application of self-crosslinking acrylate emulsion)  
IT 7440-50-8, Copper, miscellaneous  
RL: MSC (Miscellaneous)  
    (application of self-crosslinking acrylate emulsion for adhering polyimide-copper foil)  
IT **149729-50-0P**, Acrylonitrile-butyl acrylate-ethyl acrylate-2-ethylhexyl acrylate-methyl methacrylate-styrene copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
    (crosslinked; synthesis and application of self-crosslinking acrylate emulsion)  
IT **149729-50-0P**, Acrylonitrile-butyl acrylate-ethyl acrylate-2-ethylhexyl acrylate-methyl methacrylate-styrene copolymer

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (crosslinked; synthesis and application of self-crosslinking acrylate emulsion)

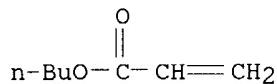
RN 149729-50-0 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-ethylhexyl 2-propenoate, ethyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

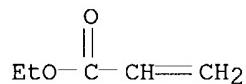
CMF C7 H12 O2



CM 2

CRN 140-88-5

CMF C5 H8 O2



CM 3

CRN 107-13-1

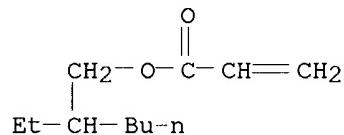
CMF C3 H3 N



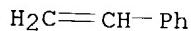
CM 4

CRN 103-11-7

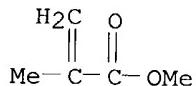
CMF C11 H20 O2



CM 5

CRN 100-42-5  
CMF C8 H8

CM 6

CRN 80-62-6  
CMF C5 H8 O2

L33 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1995:792794 HCAPLUS  
 DN 123:199743  
 ED Entered STN: 15 Sep 1995  
 TI Block polymer, thermoplastic addition polymer, production process, and use  
 IN Yoshida, Masatoshi; Kobayashi, Nobuhiro; Hasegawa, Hiroaki  
 PA Nippon Shokubai Co., Ltd., Japan  
 SO PCT Int. Appl., 157 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 IC ICM C08F293-00  
 ICS C09J153-00; C08L053-00; C08G075-14; C09J201-00; C09J201-02;  
 C09J133-06  
 CC 35-4 (Chemistry of Synthetic High Polymers)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9518162 W: CN, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE JP 07179538 JP 2842782 JP 08165462 JP 3377315 JP 2000303048 JP 3534340 JP 08176519 EP 686653 EP 686653	A1 A2 B2 A2 B2 A2 B2 A2 B2 A1 B1	19950706 19950718 19990106 19960625 20030217 20001031 20040607 19960709 19951213 19990818	WO 1994-JP2198 JP 1993-328954 JP 1994-309189 JP 1994-309189 JP 2000-69536 JP 1994-318630 EP 1995-903944 EP 1995-903944	19941222 19931224 19941213 19941213 19941213 19941221 19941222 19941222
	R: BE, DE, FR, GB, IT, NL CN 1118167 CN 1077900 US 5679762 US 5869598	A B A A	19960306 20020116 19971021 19990209	CN 1994-191285 US 1995-507243 US 1997-872212	19941222 19950818 19970610

PRAI JP 1993-328954 A 19931224  
 JP 1994-309189 A 19941213  
 JP 1994-318630 A 19941221  
 WO 1994-JP2198 W 19941222  
 US 1995-507243 A3 19950818

AB The title polymer useful in various applications including hot-melt resin composition, pressure-sensitive adhesive and support for pressure-sensitive adhesive has a configuration comprising a polyvalent mercaptan unit as the center and a number of polymer segments projecting therefrom radially, and has Mn 2,000-1,000,000. The polymer segments have at least two different compns. The block polymer is produced by at least two-stage free-radical polymerization of various polymerizable monomer components having different compns. by using a polyvalent mercaptan as the polymerization initiator.

Styrene was polymerized in the presence of pentaerythritol tetrakis(thioglycolate) to obtain a radial polymer, then Bu acrylate and acrylic acid were polymerized in the above polymerization mixture to obtain a resilient block copolymer with Mn 39,000, mol. weight distribution 8.1, and Tg -35° and +90°.

ST styrene acrylic block copolymer adhesive; pressure sensitive adhesive block copolymer

IT Adhesives  
 (pressure-sensitive, block polymer, thermoplastic addition polymer, production process, and use)

IT **167936-21-2P**

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (block polymer, thermoplastic addition polymer, production process, and use)

IT 106911-77-7P, Methyl methacrylate-styrene block copolymer 108146-73-2P,  
 Acrylonitrile-butadiene-styrene block copolymer 131830-42-7P  
 167770-42-5P 167770-43-6P 167770-44-7P 167770-45-8P 167770-46-9P  
 167770-47-0P 167770-48-1P 167936-22-3P 167936-23-4P 167936-24-5P  
 168146-34-7P

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (block polymer, thermoplastic addition polymer, production process, and use)

IT 4756-13-2, 1,2,3-Propanetri thiol 10193-99-4, Pentaerythritol tetrakis(thioglycolate) 33007-83-9, Trimethylolpropane tris(3-mercaptopropionate)

RL: NUU (Other use, unclassified); USES (Uses)  
 (block polymer, thermoplastic addition polymer, production process, and use)

IT **167936-21-2P**

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (block polymer, thermoplastic addition polymer, production process, and use)

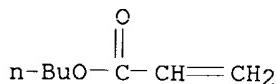
RN 167936-21-2 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile, block (9CI) (CA INDEX NAME)

CM 1

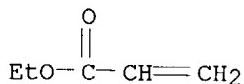
CRN 141-32-2

CMF C7 H12 O2



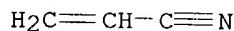
CM 2

CRN 140-88-5  
CMF C5 H8 O2



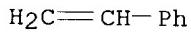
CM 3

CRN 107-13-1  
CMF C3 H3 N



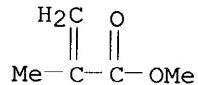
CM 4

CRN 100-42-5  
CMF C8 H8



CM 5

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 12 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1993:519621 HCPLUS  
DN 119:119621  
ED Entered STN: 18 Sep 1993  
TI Anticorrosive surface-treated steel sheets with good overcoatability and  
blackening resistance at processed parts  
IN Izumi, Keiji; Tanaka, Hidetoshi; Taketsu, Hirobumi; Uchida, Yukio

PA Nisshin Steel Co Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B05D007-24

ICS B05D003-10; B05D007-14; B32B015-08; C08K003-36; C08K005-00;  
 C08K005-54; C08L033-06; C09D125-14

CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05092173	A2	19930416	JP 1991-278623	19910930
PRAI	JP 1991-278623		19910930		

AB The title sheets are manufactured by forming chromate coatings on plated steel sheets and further forming coatings containing (meth)acrylic-styrene copolymers (styrene content 10-40 mol%), SiO<sub>2</sub> and/or silica sol, and silane coupling agents at Si content 5-25%, and optionally 1-25 phr lubricants. Thus, coating a Zn-Ni alloy-coated steel sheet with a solution containing Cr compds., silica sol, H<sub>3</sub>PO<sub>4</sub>, and H<sub>3</sub>BO<sub>3</sub>, drying at 200°, coating with a solution containing 25:25:20:30 (mol) Et acrylate-Bu acrylate-2-ethylhexyl acrylate-styrene copolymer, 10% (based on Si) silica sol, and 5% (based on Si) vinyltrimethoxysilane, and drying at 100° gave a test piece showing good blackening resistance in a draw bead test, good adhesion of Superlac F 47, and no rust formation on 100-h salt water spray test.

ST methacrylic polymer coating steel anticorrosive; acrylic polymer coating steel anticorrosive; overcoatability steel coating styrene polymer; blackening resistance steel coating

IT Lubricants

Silica gel, uses

RL: USES (Uses)

(acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)

IT Silanes

RL: USES (Uses)

(coupling agents, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)

IT Coupling agents

(silanes, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)

IT Chromates

RL: USES (Uses)

(steel sheets precoated with, acrylic-styrene polymer coatings for, with good corrosion resistance and overcoatability)

IT Coating materials

(anticorrosive, acrylic-styrene polymers, for steel sheets, with good overcoatability)

IT 7631-86-9, Silica, uses

RL: USES (Uses)

(acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)

IT 68683-41-0 79501-80-7 149729-49-7 **149729-50-0****149729-51-1** 149729-52-2

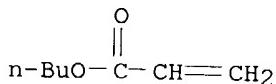
RL: TEM (Technical or engineered material use); USES (Uses)

(coatings, on chromated steel sheets, anticorrosive, with good

overcoatability)  
IT 2768-02-7, Vinyltrimethoxysilane  
RL: USES (Uses)  
(coupling agents, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)  
IT 7782-42-5, Graphite, uses  
RL: USES (Uses)  
(lubricant, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)  
IT 12597-69-2  
RL: USES (Uses)  
(lubricants, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)  
IT 12597-69-2, Steel, miscellaneous  
RL: MSC (Miscellaneous)  
(sheets, coatings for, acrylic-styrene polymers as, anticorrosive, with good overcoatability)  
IT 9002-88-4, Polyethylene  
RL: USES (Uses)  
(wax, lubricant, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)  
IT 149729-50-0 149729-51-1  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, on chromated steel sheets, anticorrosive, with good overcoatability)  
RN 149729-50-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-ethylhexyl 2-propenoate, ethyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

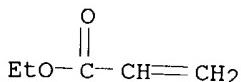
CM 1

CRN 141-32-2  
CMF C7 H12 O2



CM 2

CRN 140-88-5  
CMF C5 H8 O2



CM 3

CRN 107-13-1

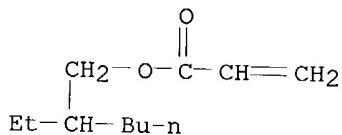
RONESI 10/072162 6/8/04 Page 43

CMF C3 H3 N



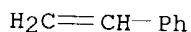
CM 4

CRN 103-11-7  
CMF C11 H20 O2



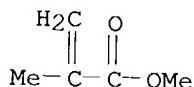
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

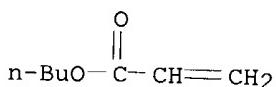
CRN 80-62-6  
CMF C5 H8 O2



RN 149729-51-1 HCPLUS  
CN 2-Propenoic acid, butyl ester, polymer with ethenylbenzene, 2-ethylhexyl 2-propenoate, ethyl 2-propenoate, methyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

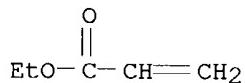
CM 1

CRN 141-32-2  
CMF C7 H12 O2



CM 2

CRN 140-88-5  
CMF C5 H8 O2



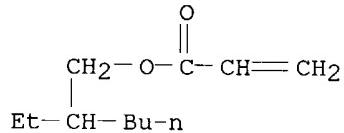
CM 3

CRN 107-13-1  
CMF C3 H3 N



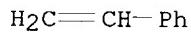
CM 4

CRN 103-11-7  
CMF C11 H20 O2



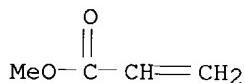
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

CRN 96-33-3  
CMF C4 H6 O2



L33 ANSWER 13 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1988:438924 HCPLUS

DN 109:38924

ED Entered STN: 05 Aug 1988

TI Weather- and heat-resistant polyimide compositions

IN Hayashi, Nobuyuki; Saito, Kyotaka

PA Denki Kagaku Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L035-06

ICS C08L025-02; C08L051-00

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 39

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63003053	A2	19880108	JP 1986-146090	19860624
	JP 07025965	B4	19950322		
PRAI	JP 1986-146090		19860624		

AB Compns. useful in preparing automobile instrument panels, solar heater parts, etc. are prepared from copolymers (comprising aromatic vinyl 35-80, unsatd. dicarboxylic acid imide derivs. 20-65, vinyl monomers 0-30, and rubbers 0-30%) 10-90, graft copolymers (comprising 5-80 parts copolymers prepared from C1-13 alkyl acrylate 60-99.99, vinyl monomer 0-40, crosslinkable compds. containing  $\geq$  2 C:C double bonds 0.01-20% grafted with 20-95 parts 40-90:0-40:0-40 aromatic vinyl-cyanovinyl-vinyl compound mixture) 10-90, and 40-90:0-40:0-40 aromatic vinyl-cyanovinyl-vinyl compound copolymers 0-80%. Thus, a mixture of 57 parts aniline-imidated 42:58 maleic anhydride-styrene copolymer and 43 parts 25:75 acrylonitrile-styrene mixture-grafted poly(Bu acrylate) [weight-average mol. weight of THF sols. (Mw) 138,000] was injection molded to give a sheet having unnotched Izod impact strength 40 kg-cm/cm, the impact strength retaining after 1000 h weathering test 38 kg-cm/cm, and Vicat softening point 156°, vs. 18, 16, and 155, resp., for a sheet containing a graft copolymer with Mw 89,000.

ST weather resistance polyimide blend; heat resistance polyimide blend; grafted polybutyl acrylate polyimide blend; aniline imidated furandione styrene copolymer

IT Heat-resistant materials

(blends of polyimides and grafted acrylic polymers as)

IT Plastics, molded

RL: USES (Uses)

(blends of polyimides and grafted acrylic polymers as, heat-shock resistant)

IT Polyimides, uses and miscellaneous

RL: USES (Uses)

(blends with grafted acrylic polymers, weather- and heat-resistant)

IT Weathering

(resistance to, of blends of polyimides and grafted acrylic polymers)

IT 16219-75-3D, polymers with acrylic monomers and maleic anhydride and styrene, graft, reaction products with aniline

RL: USES (Uses)

(blends with grafted acrylic polymers, heat- and weather-resistant)

IT 62-53-3D, Aniline, reaction products with maleic anhydride-styrene copolymer 100-42-5D, Styrene, polymer with acrylonitrile and acrylic

rubber and maleic anhydride, imidated 107-13-1D, 2-Propenenitrile, polymer with styrene and acrylic rubber and maleic anhydride, imidated 108-31-6D, 2,5-Furandione, polymer with styrene and acrylonitrile and acrylic rubber, imidated 9011-13-6D, aniline-imidated  
RL: USES (Uses)

IT 9003-54-7, Acrylonitrile-styrene copolymer  
RL: USES (Uses)  
(blends with polyimides and grafted acrylic polymers, weather- and heat-resistant)

IT 108554-70-7, Acrylonitrile-butyl acrylate-styrene graft copolymer  
**115358-18-4**  
RL: USES (Uses)

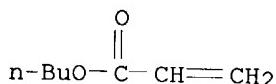
IT **115358-18-4**  
RL: USES (Uses)  
(blends with polyimides, weather- and heat-resistant)

RN 115358-18-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile, graft (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

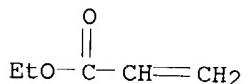
CMF C7 H12 O2



CM 2

CRN 140-88-5

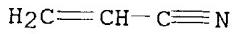
CMF C5 H8 O2



CM 3

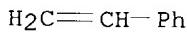
CRN 107-13-1

CMF C3 H3 N



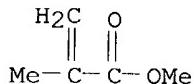
CM 4

CRN 100-42-5  
 CMF C8 H8



CM 5

CRN 80-62-6  
 CMF C5 H8 O2



L33 ANSWER 14 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1988:113809 HCPLUS  
 DN 108:113809  
 ED Entered STN: 01 Apr 1988  
 TI Highly glossy weather-resistant resin compositions  
 IN Hayashi, Nobuyuki  
 PA Denki Kagaku Kogyo K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08L051-00  
 ICS C08L025-02; C08L051-00  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 35, 37  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62223256	A2	19871001	JP 1986-65975	19860326
PRAI JP 1986-65975		19860326		

AB Compns. with good impact resistance and useful in preparing automobile parts, building materials, etc. comprise 10-100% graft copolymers [100 parts elastic polymer (prepared from C1-3 alkyl acrylate 60-99.99, vinyl or vinylidene monomer 0-40, and crosslinkable compds. containing ≥2 double bonds 0.01-20.0%) grafted by 20-900 parts mixture of aromatic vinyl monomers (A) 40-90, cyanovinyl monomers (B) 0-40, and vinyl monomers (C) 0-40% in presence of 0.01-5.0% (based on the monomers) peroxide MeCOOR or MeCO2OR (R = H, alkyl, acyl, or alkyloxycarbonyl)] and 0-90% copolymer prepared from A 40-90, B 0-40, and C 0-40%. Thus, Bu acrylate-divinylbenzene copolymer was grafted with acrylonitrile-styrene mixture in presence of tert-Bu peroxyacetate (I) to give a graft copolymer which was injection molded to give a sheet having notched Izod impact strength 20 kg-cm/cm, gloss 88%, and weather resistance (impact strength after exposed 500 h to UV radiation) 18 kg-cm/cm, vs. 9, 48, and 6.5, resp., for a sheet containing cumene hydroperoxide instead of I.  
 ST butyl peroxyacetate graft polynn initiator; gloss graft acrylic polymer

molding; weatherability acrylic graft polymer molding; divinylbenzene  
graft copolymer weatherability; acrylonitrile graft copolymer  
weatherability; styrene graft copolymer weatherability  
IT Plastics, molded  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acrylic graft polymer-SAN polymer blends, highly glossy, impact- and  
weather-resistant)  
IT Impact strength  
Luster  
(of acrylic graft copolymer and SAN polymer blends)  
IT Weathering  
(resistance to, of acrylic graft copolymer and SAN polymer blends)  
IT 9003-54-7P, Acrylonitrile-styrene copolymer  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(preparation of, blends with acrylic graft copolymer, for highly glossy and  
weather-resistant moldings)  
IT 113376-96-8P 113376-97-9P **113376-98-0P**  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(preparation of, blends with acrylonitrile-styrene copolymer, for highly  
glossy and weather-resistant moldings)  
IT 113376-95-7P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(preparation of, for highly glossy and weather-resistant moldings)  
IT **113376-98-0P**  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(preparation of, blends with acrylonitrile-styrene copolymer, for highly  
glossy and weather-resistant moldings)  
RN 113376-98-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, diethenylbenzene, ethenylbenzene, ethyl 2-propenoate and  
2-propenenitrile, graft (9CI) (CA INDEX NAME)

CM 1

CRN 1321-74-0

CMF C10 H10

CCI IDS



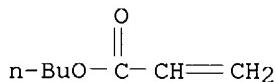
2 [ D1- CH= CH2 ]

CM 2

CRN 141-32-2

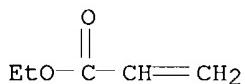
RONESI 10/072162 6/8/04 Page 49

CMF C7 H12 O2



CM 3

CRN 140-88-5  
CMF C5 H8 O2



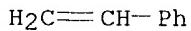
CM 4

CRN 107-13-1  
CMF C3 H3 N



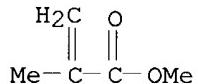
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 15 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1988:7459 HCPLUS  
DN 108:7459  
ED Entered STN: 09 Jan 1988

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

TI Self-crosslinkable acrylic ester random copolymer for textile treatment  
 IN Moriya, Yasuo; Aoyama, Kiyoshi  
 PA Nippon Oils & Fats Co., Ltd., Japan; Negami Chemical Industrial Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F220-12

ICS D06M015-263

ICI C08F220-12, C08F218-00

CC 40-9 (Textiles and Fibers)

Section cross-reference(s): 35, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62096507	A2	19870506	JP 1985-238310	19851024
PRAI	JP 1985-238310		19851024		

AB Title copolymers, which impart water repellence with good dry-cleaning-fastness, durability, and handle to fabrics, have number-average mol. weight (.hivin.Mn) 1000-500,000 and active O 0.02-1.84%, and comprises 0.2-20 mol% peroxy carbonate-containing repeating units derived from CH<sub>2</sub>:CRCH<sub>2</sub>OCOO<sub>2</sub>CR<sub>1</sub>R<sub>2</sub>R<sub>3</sub> (R = H, C<sub>1</sub>-4 alkyl; R<sub>1</sub>, R<sub>2</sub> = C<sub>1</sub>-4 alkyl; R<sub>3</sub> = C<sub>1</sub>-12 alkyl, C<sub>3</sub>-12 cycloalkyl, Ph), 20-99.3 mol% acrylate repeating units derived from acrylic esters, and 0.5-79.8 mol% repeating units derived from conjugated monomers copolymerizable with acrylates. Thus, 500 mL 1% aqueous poly(vinyl alc.), 50 g Et acrylate, 130 g Bu acrylate, 5 g CH<sub>2</sub>:CHCH<sub>2</sub>OCOO<sub>2</sub>C(CH<sub>3</sub>)<sub>3</sub> (I), and acrylonitrile 20 g were polymerized using AIBN at .apprx.70° for 6 h to give a copolymer (II) having active O content 0.1% and .hivin.Mn 48,000. Nylon taffeta coated with a 25% solution of II in PhMe, dried at 100° for 60 s, then post-heated at 200° for 60, 120 and 180 s had H<sub>2</sub>O-resistant pressure 600, 600 and 600 mm H<sub>2</sub>O, resp., initially, and 250, 450 and 540 mm H<sub>2</sub>O, resp., after dry cleaning, vs. 600, 600, 600, 130, 135, and 130, resp., without the I.

ST fabric finish self crosslinking polyacrylate; peroxy carbonate contg acrylate ester copolymer; allyl peroxy carbonate acrylate ester copolymer; cleaning dry fastness waterproofer fabric; fastness waterproofer fabric; coating fabric autocrosslinking acrylic copolymer

IT Textiles

Polyamide fibers, uses and miscellaneous

RL: USES (Uses)

(finishing agents for, peroxy carbonate containing (meth)acrylate ester copolymers as, with good dry-cleaning fastness)

IT Allylic compounds

RL: USES (Uses)

(peroxy carbonates, polymers, self-crosslinking, waterproofing textile finishes with good dry-cleaning fastness)

IT Heat-resistant materials

Light-resistant materials

(textile finishes, self-crosslinking peroxy allyl carbonate copolymers as)

IT Waterproofing

(agents, for textiles, self-crosslinking peroxy allyl carbonate copolymers, with good dry-cleaning fastness)

IT Crosslinking catalysts

(auto-, peroxy allyl carbonate copolymers, for waterproofing textiles with good dry-cleaning fastness)

IT Coating materials

(solvent- and water-resistant, for fabrics, self-crosslinkable peroxy allyl carbonate copolymers as)

IT 563-69-9D, O,O-alkyl O-alkenyl esters, polymers **111907-73-4**  
111907-74-5 **111907-75-6** **111907-76-7** 111907-77-8  
111907-78-9 111907-79-0 111907-80-3 111907-81-4 111907-82-5  
111907-83-6 111907-84-7

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(waterproofing finishes for textiles, self-crosslinkable, dry-cleaning-fast)

IT **111907-73-4** **111907-75-6** **111907-76-7**  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(waterproofing finishes for textiles, self-crosslinkable, dry-cleaning-fast)

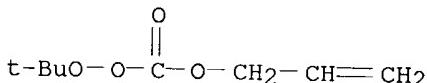
RN 111907-73-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, OO-(1,1-dimethylethyl) O-2-propenyl carbonoperoxoate, ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 65700-08-5

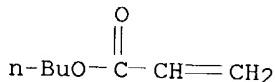
CMF C8 H14 O4



CM 2

CRN 141-32-2

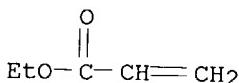
CMF C7 H12 O2



CM 3

CRN 140-88-5

CMF C5 H8 O2



RONESI 10/072162 6/8/04 Page 52

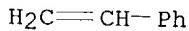
CM 4

CRN 107-13-1  
CMF C3 H3 N



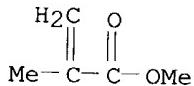
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

CRN 80-62-6  
CMF C5 H8 O2

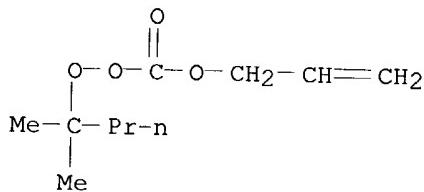


RN 111907-75-6 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, OO-(1,1-dimethylbutyl) O-2-propenyl carbonoperoxoate, ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

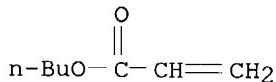
CM 1

CRN 82007-43-0  
CMF C10 H18 O4



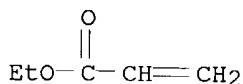
CM 2

CRN 141-32-2  
CMF C7 H12 O2



CM 3

CRN 140-88-5  
CMF C5 H8 O2



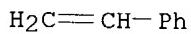
CM 4

CRN 107-13-1  
CMF C3 H3 N



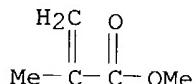
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

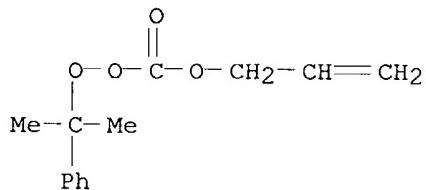
CRN 80-62-6  
CMF C5 H8 O2



RN 111907-76-7 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, OO-(1-methyl-1-  
phenylethyl) O-2-propenyl carbonoperoxoate and 2-propenenitrile (9CI) (CA  
INDEX NAME)

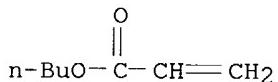
CM 1

CRN 107547-49-9  
CMF C13 H16 O4



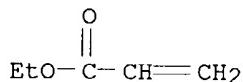
CM 2

CRN 141-32-2  
CMF C7 H12 O2



CM 3

CRN 140-88-5  
CMF C5 H8 O2



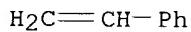
CM 4

CRN 107-13-1  
CMF C3 H3 N

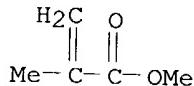


CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

CRN 80-62-6  
CMF C5 H8 O2

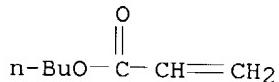
L33 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1985:96629 HCAPLUS  
 DN 102:96629  
 ED Entered STN: 22 Mar 1985  
 TI Sound-insulating sheets based on mineral fibers and thermoplastic binders  
 IN Dotzauer, Bernhard; Kast, Hans; Franzmann, Gernot; Ley, Gregor; Beckerle,  
 Wilhelm Friedrich; Schilder, Wolfgang  
 PA BASF A.-G. , Fed. Rep. Ger.  
 SO Ger. Offen., 14 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC C04B043-02; C08L033-06; C08L033-18; C08L025-08  
 CC 38-3 (Plastics Fabrication and Uses)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3314373	A1	19841025	DE 1983-3314373	19830420
	US 4587278	A	19860506	US 1984-599575	19840412
	EP 123234	A2	19841031	EP 1984-104206	19840413
	EP 123234	A3	19860716		
	EP 123234	B1	19880727		
	R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
	DK 8401998	A	19841021	DK 1984-1998	19840418
	DK 161463	B	19910708		
	DK 161463	C	19911216		
	JP 60010000	A2	19850119	JP 1984-77646	19840419
PRAI	DE 1983-3314373		19830420		
AB	The sheets, optionally containing fillers, fireproofing agents, and waterproofing agents, wherein the binder is 4-20% (based on fiber weight) of a copolymer (glass temperature 30-80°) of ≥60% C1-4-alkyl methacrylates and ≤40% acrylonitrile and (or) styrene. Thus, to a suspension of 330 parts rock wool (average fiber length 3 cm) in 5000 parts H <sub>2</sub> O were added (based on fibers) clay 15, distearyldiketene 2, 50% anionic dispersion of acrylonitrile-Bu acrylate-Me methacrylate copolymer [27340-76-7] (glass temperature 62°) 8.5, and Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> precipitant 0.4%. After dewatering by partial vacuum on a sieve, assisted by light pressure (.apprx.0.1 bar), the resulting 15-mm thick sheet was dried 2-3 h to give a sound insulator sheet with bending strength (4 cm width) 63 N (DIN 53 423).				
ST	acrylic mineral wool sound insulator				
IT	Binding materials (acrylic polymers, for mineral wool-based sound insulators)				
IT	Sound insulators				

IT Mineral wool (mineral wool containing acrylic polymers)  
IT Acrylic polymers, uses and miscellaneous (sound insulators, containing acrylic polymers)  
IT RL: USES (Uses) (sound insulators, containing mineral wool)  
IT 25852-38-4 27340-76-7 28206-15-7 29763-01-7 **95053-13-7**  
IT 95053-14-8 RL: USES (Uses) (sound insulators, containing mineral wool)  
**95053-13-7** RL: USES (Uses) (sound insulators, containing mineral wool)  
RN 95053-13-7 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

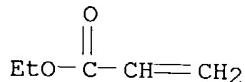
CM 1

CRN 141-32-2  
CMF C7 H12 O2



CM 2

CRN 140-88-5  
CMF C5 H8 O2



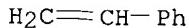
CM 3

CRN 107-13-1  
CMF C3 H3 N



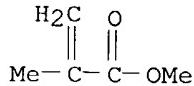
CM 4

CRN 100-42-5  
CMF C8 H8



CM 5

CRN 80-62-6  
 CMF C5 H8 O2



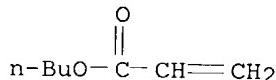
L33 ANSWER 17 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1984:572447 HCPLUS  
 DN 101:172447  
 ED Entered STN: 10 Nov 1984  
 TI Delustered thermoplastic resin composition  
 IN Kishida, Kazuo; Hasegawa, Akira; Sugimori, Masahiro  
 PA Mitsubishi Rayon Co., Ltd. , Japan  
 SO U.S., 7 pp. Cont.-in-part of U.S. Ser. No. 204,169, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC C08L025-14; C08L051-06; C08L027-06; C08L033-04  
 NCL 525064000  
 CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4460742	A	19840717	US 1981-324269	19811123
	JP 56088460	A2	19810717	JP 1979-152564	19791126
PRAI	JP 1979-152564		19791126		
	US 1980-204169		19801105		
AB	A thermoplastic resin composition having low luster consists of 100 parts thermoplastic resin and 0.1-40 parts resin comprising 20-80 parts polymer component A containing 30-100% C1-4 alkyl methacrylate, 0-70% C1-13 alkyl acrylate, and 0-50% monoethylenically unsatd. monomer and 20-80 parts polymer component B containing 30-90% vinyl aromatic compound, 10-60% C1-13 alkyl acrylate, 0.20% monoethylenically unsatd. monomer, and 0.05-10 parts crosslinking monomer/100 parts total monomers for polymer B. The modifying resin may be prepared by polymerizing the monomers for polymer B in the presence of polymer A or by blending the 2 polymers. Thus, poly(Me methacrylate) [9011-14-7] and 40:60:2 Et acrylate-styrene-triallylcyanurate copolymer [79497-40-8] were blended at 50:50 ratio, and 7 parts blend was mixed with 100 parts composition containing PVC [9002-86-2] 100, stabilizer 3, impact resistance aid 10, processing aid 1, and lubricant 1 part; kneaded by a roll at 165° to give a sheet; and compression molded at 165° and 40 kg/cm <sup>2</sup> to give samples having 60° specular gloss 23% and Charpy impact strength 15.9 kg-cm/cm <sup>2</sup> .				

ST delustering PVC; acrylate copolymer delustering PVC; styrene copolymer  
delustering PVC  
IT Luster  
(lowering of, of PVC, by acrylic polymer)  
IT 50658-01-0 65994-33-4 79497-40-8 80293-67-0  
RL: USES (Uses)  
(acrylic polymer blends, delustering agents, for PVC)  
IT 9011-14-7 25767-47-9 25852-37-3 31215-83-5  
RL: PRP (Properties)  
(acrylic polymer blends, delustering agents, for PVC)  
IT 9002-86-2  
RL: USES (Uses)  
(delustering agents for, acrylic polymers as)  
IT 33479-64-0 33479-65-1 **51512-67-5** 60453-11-4 60453-13-6  
RL: USES (Uses)  
(graft, delustering agents, for PVC)  
IT **51512-67-5**  
RL: USES (Uses)  
(graft, delustering agents, for PVC)  
RN 51512-67-5 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, 2-propenenitrile and  
2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

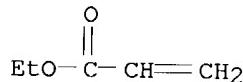
CM 1

CRN 141-32-2  
CMF C7 H12 O2



CM 2

CRN 140-88-5  
CMF C5 H8 O2

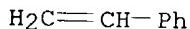


CM 3

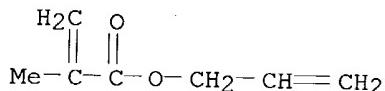
CRN 107-13-1  
CMF C3 H3 N



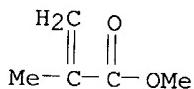
CM 4

CRN 100-42-5  
CMF C8 H8

CM 5

CRN 96-05-9  
CMF C7 H10 O2

CM 6

CRN 80-62-6  
CMF C5 H8 O2

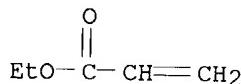
L33 ANSWER 18 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1981:5041 HCPLUS  
 DN 94:5041  
 ED Entered STN: 12 May 1984  
 TI Waterproofing coating compositions  
 PA Toa Gosei Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC C09K003-18; C04B041-28; E04B001-64  
 CC 42-10 (Coatings, Inks, and Related Products)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55102673	A2	19800806	JP 1979-8796	19790130
	JP 63020872	B4	19880430		
PRAI	JP 1979-8796		19790130		
AB	Waterproofing coating compns. with good penetrating power contain an alkoxysilane and an acrylic polymer in 1:0.1-10 ratio. For example, a composition (viscosity 14 s) from isobutyltrimethoxysilane [18395-30-7] 0.8, tetraethoxysilane [78-10-4] 0.2, 0.02:0.02:0.01:0.1:0.05 acrylonitrile-Et				

acrylate-Me acrylate-Me methacrylate-styrene copolymer [  
69596-36-7] 0.2, and iso-PrOH 4.0 parts gave a waterproofing  
coating (on concrete) with excellent durability.  
ST silane acrylic coating concrete; waterproofing coating concrete  
IT Concrete  
(waterproofing coatings for, alkoxy silane-acrylic polymer as  
penetrating)  
IT Waterproof materials and Water-repellent materials  
(coatings, alkoxy silane-acrylic polymer, penetrating, for concrete)  
IT 78-10-4 18395-30-7  
RL: USES (Uses)  
(waterproofing coatings containing acrylic polymers and, penetrating, for  
concrete)  
IT 69596-36-7  
RL: USES (Uses)  
(waterproofing coatings containing alkoxy silanes and, penetrating, for  
concrete)  
IT 69596-36-7  
RL: USES (Uses)  
(waterproofing coatings containing alkoxy silanes and, penetrating, for  
concrete)  
RN 69596-36-7 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene,  
ethyl 2-propenoate, methyl 2-propenoate and 2-propenenitrile (9CI) (CA  
INDEX NAME)

CM 1

CRN 140-88-5  
CMF C5 H8 O2



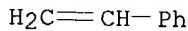
CM 2

CRN 107-13-1  
CMF C3 H3 N

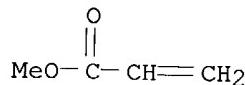


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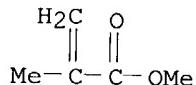
CRN 100-42-5  
CMF C8 H8



CM 4

CRN 96-33-3  
CMF C4 H6 O2

CM 5

CRN 80-62-6  
CMF C5 H8 O2

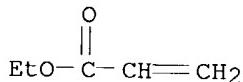
L33 ANSWER 19 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1979:123290 HCPLUS  
 DN 90:123290  
 ED Entered STN: 12 May 1984  
 TI Leveling agent for floor polishes  
 IN Feigin, Robert  
 PA Sybron Corp., USA  
 SO U.S., 4 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC C09G001-16  
 NCL 260029600MQ  
 CC 42-11 (Coatings, Inks, and Related Products)  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4131585	A	19781226	US 1978-898859	19780421
PRAI US 1976-741544		19761115		
AB Leveling agents RZ(CHR1CH2O) <sub>m</sub> (CHR2CH2O) <sub>n</sub> H (R = C8-15 branched alkyl or alkylphenyl; Z = O, S; R1, R2 = H, Me; n + m ≤ 7) for floor polishes give compns. with high gloss, hardness, and resistance to streaking. Thus, water 54.6, 1% surfactant solution 0.8, 37% HCHO solution 0.2, diethylene glycol monoethyl ether 2.5, 30% emulsion of acrylonitrile-Et acrylate-Me acrylate-Me methacrylate-styrene copolymer [69596-36-7] 31.7, 40% emulsion of polyethylene [9002-88-4] 3.7, ammoniated rosin-maleic anhydride resin 10.0, and polyethylene glycol isodecyl ether [61827-42-7] 0.7 part were mixed and applied to vinyl asbestos floor tile to give a film with high gloss, water and heel mark resistance, and detergent resistance.				
ST polyoxyalkylene ether floor polish; leveling agent floor polish				

IT Polishing materials  
(acrylic polymers, leveling agents for, polyoxyalkylene ethers as)  
IT Resin acids and Rosin acids  
RL: USES (Uses)  
(maleated, floor polishes containing)  
IT Leveling agents  
Plasticizers  
(polyoxyalkylene ethers, for floor polishes)  
IT 25035-69-2 35705-21-6 **69596-36-7**  
RL: USES (Uses)  
(floor polishes based on, leveling agents for)  
IT 9002-88-4 9010-77-9 9011-13-6 55939-33-8  
RL: USES (Uses)  
(floor polishes containing)  
IT 61827-42-7 69620-43-5 69671-04-1  
RL: USES (Uses)  
(leveling agents, for floor polishes)  
IT **69596-36-7**  
RL: USES (Uses)  
(floor polishes based on, leveling agents for)  
RN 69596-36-7 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene,  
ethyl 2-propenoate, methyl 2-propenoate and 2-propenenitrile (9CI) (CA  
INDEX NAME)

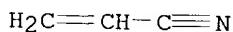
CM 1

CRN 140-88-5  
CMF C5 H8 O2



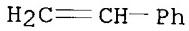
CM 2

CRN 107-13-1  
CMF C3 H3 N

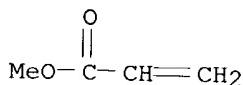


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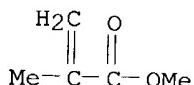
CRN 100-42-5  
CMF C8 H8



CM 4

CRN 96-33-3  
CMF C4 H6 O2

CM 5

CRN 80-62-6  
CMF C5 H8 O2

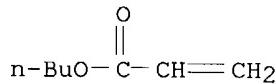
L33 ANSWER 20 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1979:88332 HCPLUS  
 DN 90:88332  
 ED Entered STN: 12 May 1984  
 TI Thermoplastic molding compositions having good impact and weathering resistance  
 IN Kamata, Kazumasa; Kinoshita, Yasuo; Hongo, Masafumi; Nakanishi, Hiroshi  
 PA Mitsubishi Rayon Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC C08L069-00  
 CC 36-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53129246	A2	19781111	JP 1977-44373	19770418
	JP 62037671	B4	19870813		
PRAI	JP 1977-44373		19770418		
AB	Compsns. of saturated polyesters 5-94, polycarbonates 5-94, and vinyl compound-grafted acrylic rubber 1-40% have good moldability and good mech. and thermal properties. Thus, a mixture of Bu acrylate 90, styrene 9, triallyl isocyanurate 1, and dioctyl sulfosuccinate 1.5 parts was added dropwise over 1 h to 400 parts H2O containing 0.5 parts K2S2O8 at 70° and stirred 1 h. A mixture of Me methacrylate 30, styrene 20, and C12H25SH 0.1 part was added to the above emulsion for 1 h and stirred 1 h addnl. to give a graft copolymer (I) [66453-75-6]. A blend of poly(ethylene terephthalate) [25038-59-9] 22.5, bisphenol A polycarbonate [24936-68-3] 67.5, and I 10.0 parts was extruded at 250-80°, pelletized, and injection molded at 280° to give test pieces having melt index (265°, 5 kg) 24.0 g/10 min, heat-distortion temperature 115.1°, and impact strength (ASTM D 256) 18.8 and 18.0 kg-cm/cm <sup>2</sup> before and after				

ST 400 h in a weatherometer, resp.  
ST polyester polycarbonate blend; graft copolymer blend; acrylic rubber  
grafted blend; impact resistance plastic blend  
IT Plastics, molded  
RL: USES (Uses)  
(grafted acrylic rubber-polycarbonate-polyester blends,  
impact-resistant)  
IT Rubber, synthetic  
RL: USES (Uses)  
(acrylic, vinyl compound-grafted, in impact-resistant polymer blends)  
IT 24968-12-5 25038-59-9, uses and miscellaneous 26062-94-2  
RL: USES (Uses)  
(blends with polycarbonates and grafted acrylic rubber,  
impact-resistant)  
IT 24936-68-3, uses and miscellaneous  
RL: USES (Uses)  
(blends with polyester and grafted acrylic rubber, impact-resistant)  
IT 25037-45-0  
RL: PRP (Properties)  
(blends with polyester and grafted acrylic rubber, impact-resistant)  
IT 51512-67-5 66453-75-6 69289-12-9  
RL: USES (Uses)  
(graft, blends with polycarbonates and polyesters, impact-resistant)  
IT 51512-67-5  
RL: USES (Uses)  
(graft, blends with polycarbonates and polyesters, impact-resistant)  
RN 51512-67-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, 2-propenenitrile and  
2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

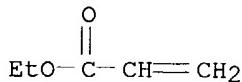
CM 1

CRN 141-32-2  
CMF C7 H12 O2



CM 2

CRN 140-88-5  
CMF C5 H8 O2



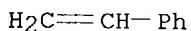
CM 3

CRN 107-13-1  
CMF C3 H3 N



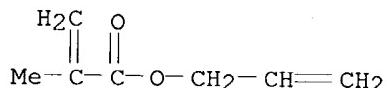
CM 4

CRN 100-42-5  
CMF C8 H8



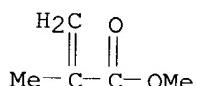
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2

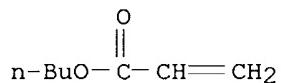


L33 ANSWER 21 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1978:106186 HCPLUS  
DN 88:106186  
ED Entered STN: 12 May 1984  
TI Weather- and impact-resistant resin compositions  
IN Kato, Tetsuji; Izumi, Mikio; Kamata, Kazumasa; Chikanishi, Kunio; Handa, Yoshiharu  
PA Mitsubishi Rayon Co., Ltd., Japan  
SO Jpn. Tokkyo Koho, 5 pp. Division of Japan. Koho 74 06,194.  
CODEN: JAXXAD  
DT Patent  
LA Japanese  
IC C08L033-10  
CC 36-3 (Plastics Manufacture and Processing)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 52033656	B4	19770830	JP 1973-89977	19730813
PRAI	JP 1973-89977		19730813		
AB	<p>Crosslinked elastomers of <math>\geq 60\%</math> C1-10 alkyl acrylate and <math>\leq 40\%</math> monomer(s) chosen from (meth)acrylonitrile (I), styrene (II), <math>\alpha</math>-methylstyrene (III), and C1-10 alkyl methacrylate were grafted in 100:5-900 ratio with monomer mixts. of Me methacrylate (IV) 10-50, I 5-40, and II (or III) <math>\leq 60\%</math>, and terpolymers of IV 10-50, I 5-40, and II (or III) <math>\leq 60\%</math> were blended with 5-40% (based on the crosslinked elastomers) grafted elastomers for improved weather resistance. For example, 200 parts water containing 0.15 part NaHSO<sub>3</sub> at 35° was mixed with 0.3 part K2S2O<sub>8</sub>, treated with Bu acrylate 90, IV 10, Bz2O<sub>2</sub> 1, and Pelex OTP 2.4 parts over 2.5 h, polymerized for 30 min (conversion &gt;95%; 98% Bz2O<sub>2</sub> intact), and crosslinked at 98° for 3 h (gel content 95.1%), and the resulting latex (305 parts) at 70° was treated with a mixture of IV 12, acrylonitrile 6, and II 12 parts and a solution of 0.15 part K2S2O<sub>8</sub> in 5 parts water for 1.5 h to give a graft copolymer [25852-38-4]. An injection molding of 20:40:40 acrylonitrile-Me methacrylate-styrene copolymer [25213-88-1] containing 25% (based on the elastomer) of the graft copolymer had Dynstat impact strength 88-106 kg-cm/cm<sup>2</sup>, weather resistance 800 h, and heat distortion temperature 88°, compared with 75-90, 50, and 86, resp., for a high impact-type ABS.</p>				
ST	weather resistant acrylic polymer; impact resistant acrylic polymer; acrylic rubber grafted				
IT	<p>Plastics            (acrylic blends, impact- and weather-resistant)</p>				
IT	<p>Rubber, synthetic            (acrylic, grafted, blends with acrylic polymers, weather- and impact-resistant)</p>				
IT	32505-73-0				
	RL: USES (Uses) (blends with grafted acrylic rubbers, weather- and impact resistant)				
IT	25213-88-1 25747-75-5				
	RL: USES (Uses) (blends with grafted acrylic rubbers, weather- and impact-resistant)				
IT	25852-38-4 32505-75-2				
	RL: USES (Uses) (graft, blends with acrylonitrile-Me methacrylate-styrene copolymer, weather- and impact resistant)				
IT	<b>65842-98-0</b>				
	RL: USES (Uses) (graft, blends with acrylonitrile-Me methacrylate- $\alpha$ -methylstyrene copolymer, weather- and impact-resistant)				
IT	65842-99-1				
	RL: USES (Uses) (graft, blends with methacrylonitrile-Me methacrylate-styrene copolymer, weather- and impact-resistant)				
IT	<b>65842-98-0</b>				
	RL: USES (Uses) (graft, blends with acrylonitrile-Me methacrylate- $\alpha$ -methylstyrene copolymer, weather- and impact-resistant)				
RN	65842-98-0 HCAPLUS				
CN	2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, (1-methylethenyl)benzene and 2-propenenitrile (9CI) (CA INDEX NAME)				

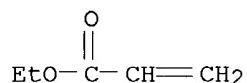
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CRN 141-32-2  
CMF C7 H12 O2



CM 2

CRN 140-88-5  
CMF C5 H8 O2



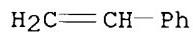
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CRN 107-13-1  
CMF C3 H3 N



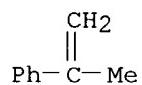
CM 4

CRN 100-42-5  
CMF C8 H8



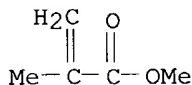
CM 5

CRN 98-83-9  
CMF C9 H10



CM 6

CRN 80-62-6  
 CMF C5 H8 O2



L33 ANSWER 22 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1978:23851 HCPLUS  
 DN 88:23851  
 ED Entered STN: 12 May 1984  
 TI Vinyl chloride resin compositions  
 IN Kosugi, Takumi; Yasunaga, Shigeki; Tanaka, Yutaka; Hashimoto, Yoshihiko  
 PA Kanegafuchi Chemical Industry Co., Ltd., Japan  
 SO U.S., 8 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC C08L027-06  
 NCL 260029600RB  
 CC 36-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4014842	A	19770329	US 1975-606766	19750822
PRAI	US 1973-363478		19730524		

AB Weather-resistant impact improving agents for PVC [9002-86-2] are manufactured by grafting acrylonitrile (I), Me methacrylate (II), and styrene onto copolymers of allyl (meth)acrylate and Et acrylate and(or) Bu acrylate (III). Thus, styrene 24, II 12, I 4, and cumene hydroperoxide 0.2 parts were added in 4 h at 60° with stirring to an aqueous dispersion containing allyl methacrylate (IV)-III copolymer, Na formaldehyde sulfoxylate, EDTA di-Na salt, FeSO4.7H2O, and heated an addnl. h at 60° to complete polymerization, giving graft copolymer (V) [32457-46-8] at 95% conversion. A mixture containing PVC (average d.p. 700) 100, V 12, Bu2Sn mercaptide 2, epoxidized

soybean oil 1, and oily wax 0.5 parts was molded to give a sample with Izod impact strength 20.8 kg cm/cm<sup>2</sup>, tensile strength 482 kg/cm<sup>2</sup>, and elongation 185% compared with 7.8 kg cm/cm<sup>2</sup>, 399 kg/cm<sup>2</sup>, and 184%, resp., for a similar sample containing ethylene glycol dimethacrylate instead of IV in the copolymer to be grafted onto.

ST allyl methacrylate copolymer impact improver; PVC impact resistance; weather resistance PVC; acrylate copolymer impact improver; acrylonitrile copolymer impact improver; methacrylate graft copolymer impact improver

IT Polymerization  
 (graft, of acrylonitrile, Me methacrylate and styrene on Bu acrylate-allyl (meth)acrylate copolymers)

IT 32457-46-8 51464-67-6 **51512-67-5**

RL: USES (Uses)  
 (graft, weather-resistant impact improving agents, for PVC)

IT 9002-86-2  
 RL: USES (Uses)  
 (weather-resistant impact improving agents for, acrylic graft

copolymers as)

IT 51512-67-5

RL: USES (Uses)

(graft, weather-resistant impact improving agents, for PVC)

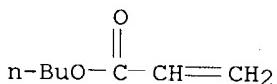
RN 51512-67-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, 2-propenenitrile and  
2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

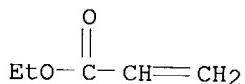
CMF C7 H12 O2



CM 2

CRN 140-88-5

CMF C5 H8 O2



CM 3

CRN 107-13-1

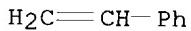
CMF C3 H3 N



CM 4

CRN 100-42-5

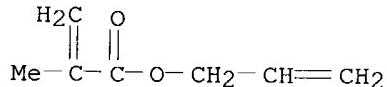
CMF C8 H8



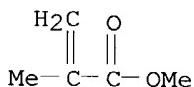
CM 5

CRN 96-05-9

CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2

L33 ANSWER 23 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1974:414271 HCPLUS  
 DN 81:14271  
 ED Entered STN: 12 May 1984  
 TI Vinyl chloride resin  
 IN Kosugi, Takumi; Yasunaga, Shigeki; Tanaka, Yutaka; Hashimoto, Yoshihiko  
 PA Kanegafuchi Chemical Industry Co., Ltd.  
 SO Ger. Offen., 26 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC C08F  
 CC 36-6 (Plastics Manufacture and Processing)  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	DE 2326934	A1	19731213	DE 1973-2326934	19730525
	JP 49010237	A2	19740129	JP 1972-52321	19720525
	JP 51028117	B4	19760817		
PRAI	JP 1972-52321		19720525		
AB	Impact modifiers with improved weather resistance for PVC [9002-86-2] were prepared by grafting 20-100:0-80:0-20 Me methacrylate (I)-styrene-Bu acrylate (II) mixts., 40-80:10-50:0-20 styrene-acrylonitrile(III)-II mixts., or 20-70:10-60:20-50:0-20 I-styrene-III-II mixts. onto a base copolymer containing 20-80% alkyl acrylate or a combination of .geq.80% Bu acrylate and .leq.20% allyl (meth)acrylate. Thus, an aqueous mixture containing II 100, allyl methacrylate (IV) 1, Na dodecylbenzenesulfonate 0.8, and K2S2O8 6.5 parts was stirred 6 hr at 59-60.deg. to a copolymer of swelling degree 15.4%, gel content 89.3%, and d.p. 98%. A solution containing styrene 24, I 12,				
	III 4, and cumene hydroperoxide 0.2 parts was added in 4 hr at 60.deg. to an aqueous mixture containing the above prepared copolymer 60, water 200, Na formaldehydesulfoxylate 0.4, EDTA.2Na 0.01, and FeSO4.7H2O 6.0005 parts and the mixture stirred an addnl. 1 hr to give acrylonitrile-allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer (V) [32457-46-8] of grafting degree 95%. A composition containing PVC(d.p. 700)				

100, V 12, dibutyltin sulfide 2, epoxidized soybean oil 1, and oily wax 0.5 had Izod impact strength 20.8 kg cm/cm<sup>2</sup> and tensile strength 482 kg/cm<sup>2</sup> compared to 7.8 kg cm/cm<sup>2</sup> and 399 kg/cm<sup>2</sup> for a similar composition containing a graft copolymer prepared from ethylene glycol dimethacrylate instead of IV.

ST impact modifier acrylic; PVC impact strength; weather resistance impact modifier; allyl methacrylate graft copolymer; styrene graft copolymer; blend PVC

IT Polymerization

(graft, of styrene and acrylic monomers on allyl (meth)acrylate polymers)

IT 32457-46-8P 50658-01-0P 51252-07-4P 51252-08-5P 51464-67-6P  
**51512-67-5P**

RL: PREP (Preparation)

(graft, manufacture of, as impact modifier for PVC)

IT 9002-86-2

RL: USES (Uses)

(impact-resistant weatherable, containing crosslinked acrylic graft polymers)

IT **51512-67-5P**

RL: PREP (Preparation)

(graft, manufacture of, as impact modifier for PVC)

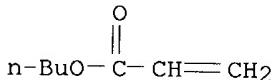
RN 51512-67-5 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, 2-propenenitrile and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

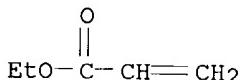
CMF C7 H12 O2



CM 2

CRN 140-88-5

CMF C5 H8 O2



CM 3

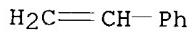
CRN 107-13-1

CMF C3 H3 N



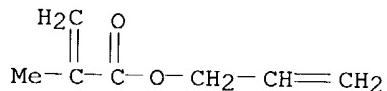
CM 4

CRN 100-42-5  
CMF C8 H8



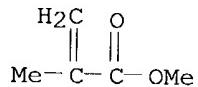
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 24 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1973:112202 HCPLUS  
DN 78:112202  
ED Entered STN: 12 May 1984  
TI Molding materials based on rubber-modified nitrile copolymers for making food-packaging materials  
IN Endo, Ryuichi  
SO Ger. Offen., 30 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
IC C08F  
CC 36-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 17  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE  
----- ----- -----  
PI DE 2219708 19721109  
FR 2139838 FR

GB	1370056	GB	
JP	47039241	19720000	JP
JP	50037700	19750000	JP
US	3775518	19730000	US
PRAI	JP 1971-26109	19710423	

AB The title materials which gave thermally stable, transparent, and impact resistant products, contained 100 parts copolymer A prepared by polymerizing 40-90 parts monomer mixture (a) of 55-90% .geq.1 CH<sub>2</sub>:CR1CN (R1 = H, Me, Et) and 10-45% .geq.1 CH<sub>2</sub>:CR2CO<sub>2</sub>R<sub>3</sub> (R<sub>2</sub> = H, Me, Et and R<sub>3</sub> = C<sub>1-4</sub> alkyl) and 5-60 parts rubbery polymer (b) of 30-80% .geq.1 CH<sub>2</sub>:CR4CO<sub>2</sub>R<sub>5</sub> (R<sub>4</sub> = H, Me, Et and R<sub>5</sub> = C<sub>2-10</sub> alkyl), 4-50% .geq.1 conjugated diolefin, and 5-30% .geq.1 CH<sub>2</sub>:CR6C<sub>6</sub>H<sub>4</sub>R<sub>7</sub> (R<sub>6</sub> = H, Me and R<sub>7</sub> = H, halogen, Me) and 0-100 copolymer B prepared by polymerizing (a) and 5-30% (b). Thus, butadiene-2-ethylhexyl acrylate-styrene copolymer (I) [25086-98-0] was prepared and 15 parts I was polymerized with a monomer mixture containing 70 parts

acrylonitrile [107-13-1] and 30 parts Me acrylate [96-33-3]. The copolymer product was granulated and formed into a 3-mm-thick plate and had transparency 91.0%, yellowing index (ASTM D-1925-63T) before heating 6.8 and after heating 13.2, Izod impact strength 12.8 kg-cm/cm<sup>2</sup>, and heat distortion temperature 62.5.deg..

ST food packaging material; acrylate copolymer molding; butadiene copolymer molding; styrene copolymer molding; acrylonitrile copolymer molding

IT Packaging materials

(acrylate rubber transparent sheets, for food)

IT Rubber, synthetic

(acrylate, for food packaging)

IT Food

(packaging materials for, acrylate rubber transparent sheets as)

IT 41585-11-9 41585-12-0 **41585-13-1** 41585-14-2 41585-15-3  
41586-86-1

RL: USES (Uses)

(block, rubber, for food packaging)

IT 25086-98-0

RL: USES (Uses)

(rubber)

IT **41585-13-1**

RL: USES (Uses)

(block, rubber, for food packaging)

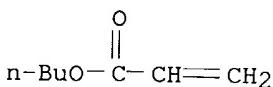
RN 41585-13-1 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-methyl-1,3-butadiene, methyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

CMF C7 H12 O2



CM 2

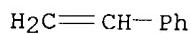
RONESI 10/072162 6/8/04 Page 74

CRN 107-13-1  
CMF C3 H3 N



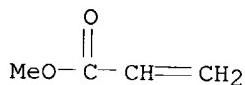
CM 3

CRN 100-42-5  
CMF C8 H8



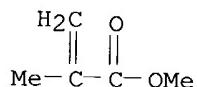
CM 4

CRN 96-33-3  
CMF C4 H6 O2



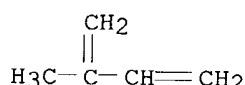
CM 5

CRN 80-62-6  
CMF C5 H8 O2



CM 6

CRN 78-79-5  
CMF C5 H8



L33 ANSWER 25 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
AN 1972:86394 HCPLUS

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

DN 76:86394  
 ED Entered STN: 12 May 1984  
 TI Graft copolymers and their blends having excellent impact and weather resistance  
 IN Kato, Tetsuji; Izumi, Mikio; Kamada, Kazumasa; Chikanishi, Kunio; Handa, Ryoji  
 PA Mitsubishi Rayon Co., Ltd.  
 SO Brit., 20 pp.  
 CODEN: BRXXAA  
 DT Patent  
 LA English  
 IC C08F  
 CC 35 (Synthetic High Polymers)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1254226		19711117	GB	19690721
AB	Graft copolymers were prepared by emulsion polymerization of 5-1900 parts vinyl monomers and optional copolymerizable polyenes in the presence of an aqueous dispersion latex containing 100 parts crosslinked acrylate elastomer (gel content .geq.80%, degree of swelling 3-15) preferably prepared in the presence of an organic peroxide. Blends were prepared from 5-95 parts graft copolymer and 95-5 parts thermoplastic resin. Thus, a crosslinked acrylate elastomer, i.e. a 90:10 butyl acrylate-methyl methacrylate copolymer [25852-37-3] reaction mixture under N containing aqueous NaHSO <sub>3</sub> , K2S2O <sub>8</sub> , Bz2O <sub>2</sub> , and Pelex OTP sulfosuccinate emulsifier was added to a mixture of acrylonitrile, styrene, and ethylene glycol dimethacrylate, then mixed with aqueous K2S2O <sub>8</sub> and polymerized to give a graft copolymer latex which was diluted with H <sub>2</sub> O and mixed with acrylonitrile, styrene, lauryl mercaptan, and K2S2O <sub>8</sub> to give a graft copolymer latex with good gloss.				
ST	styrene graft copolymer; acrylonitrile graft copolymer; acrylate graft copolymer; methacrylate graft copolymer; blend graft copolymer; weather resistance copolymer; impact resistance copolymer; glossy graft copolymer				
IT	Polymerization (graft, of vinyl compds. on acrylic rubber)				
IT	Plastics, molded RL: USES (Uses) (impact and weather resistant, from crosslinked acrylate elastomer-thermoplastic resin blends)				
IT	9002-86-2	9003-54-7	9010-96-2	9011-87-4	25213-88-1
	26299-47-8	32505-73-0			25747-75-5
IT	RL: USES (Uses) (blends with crosslinked acrylate elastomers, impact and weather resistant moldings from)				
IT	25852-38-4	33011-39-1			
IT	RL: USES (Uses) (graft, blends with thermoplastic resins, impact and weather resistant)				
IT	32457-41-3	32457-42-4	32457-43-5	32457-44-6	32505-64-9
	32505-65-0	<b>32505-74-1</b>	32505-75-2	32505-76-3	32505-77-4
	32505-83-2	33660-17-2	36424-75-6	36424-76-7	36424-77-8
IT	RL: USES (Uses) (graft, blends with thermoplastic resins, impact and weather resistant moldings from)				
IT	9079-47-4				
IT	RL: USES (Uses) (graft, blends with thermoplastic resins, impact- and				

weather-resistant)

IT **32505-74-1**

RL: USES (Uses)

(graft, blends with thermoplastic resins, impact and weather resistant moldings from)

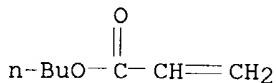
RN 32505-74-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-methyl-2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

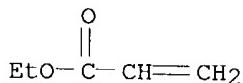
CMF C7 H12 O2



CM 2

CRN 140-88-5

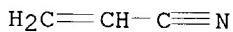
CMF C5 H8 O2



CM 3

CRN 107-13-1

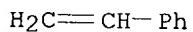
CMF C3 H3 N



CM 4

CRN 100-42-5

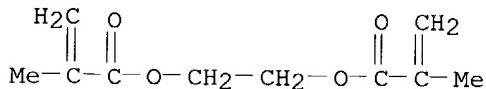
CMF C8 H8



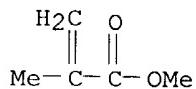
CM 5

CRN 97-90-5

CMF C10 H14 O4



CM 6

CRN 80-62-6  
CMF C5 H8 O2

L33 ANSWER 26 OF 26 HCPLUS COPYRIGHT 2004 ACS on STN  
 AN 1971:142831 HCPLUS  
 DN 74:142831  
 ED Entered STN: 12 May 1984  
 TI Graft polymers with excellent resistance to shock and weathering  
 IN Kato, Tetsuji; Izumi, Mikio; Chikanishi, Kunio; Handa, Ryoji; Kamada, Kazumasa  
 PA Mitsubishi Rayon Co., Ltd.  
 SO Ger. Offen., 45 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC C08F  
 CC 36 (Plastics Manufacture and Processing)  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 1937999	A	19710211	DE 1969-1937999	19690725
PRAI DE 1969-1937999		19690725		

AB The title polymers were prepared by grafting vinyl monomer(s) onto a crosslinked acrylate elastomer. Thus, Bu acylate, Me methacrylate, Bz202 and Pelex OTP was slowly added to aqueous NaHSO<sub>3</sub> containing K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> and the mixture stirred 3 hr at 98°. The resulting crosslinked elastomer was treated with acrylonitrile (I), styrene (II), ethylene glycol dimethacrylate and K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> 90 min at 70°. The graft copolymer latex was diluted with water and treated with addnl. I and II with C<sub>12</sub>H<sub>25</sub>SH and K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>. The product was worked up and injection molded into samples with exceptional impact strength and surface luster.

ST vinyl acrylic graft copolymers; impact strength graft copolymers; weather resistant graft copolymers; styrene grafted acrylate elastomers; molding grafted acrylate elastomer

IT Acrylonitrile, polymer with α-methylstyrene and styrene, preparation  
 Styrene, polymer with acrylonitrile and α-methylstyrene, preparation  
 Styrene, α-methyl-, polymer with acrylonitrile and styrene  
 RL: PREP (Preparation)

(graft copolymers containing, shock-resistant)

- IT Acrylonitrile, polymer with allyl methacrylate butyl acrylate, methyl methacrylate and styrene, preparation  
Acrylonitrile, polymer with butyl acrylate, butyl methacrylate, ethylene methacrylate, methyl methacrylate, styrene and 2,4,6-tris(allyloxy)-s-triazine, preparation  
Acrylonitrile, polymer with butyl acrylate, ethylene methacrylate, methacrylonitrile and styrene, preparation  
Acrylonitrile, polymer with butyl acrylate, methyl methacrylate, styrene and tetraethylene glycol dimethacrylate, preparation  
Methacrylic acid methyl ester, polymer with acrylonitrile, allyl methacrylate, butyl acrylate and styrene, preparation  
Methacrylic acid methyl ester, polymer with acrylonitrile, butyl acrylate, butyl methacrylate, ethylene methacrylate, styrene and 2,4,6-tris(allyloxy)-s-triazine, preparation  
Methacrylic acid methyl ester, polymer with acrylonitrile, butyl acrylate, styrene and tetraethylene glycol dimethacrylate, preparation  
Styrene, polymer with acrylonitrile butyl acrylate, methyl methacrylate and tetraethylene glycol dimethacrylate, preparation  
Styrene, polymer with acrylonitrile, allyl methacrylate, butyl acrylate and methyl methacrylate, preparation  
Styrene, polymer with acrylonitrile, butyl acrylate, butyl methacrylate, ethylene methacrylate, methyl methacrylate and 2,4,6-tris(allyloxy)-s-triazine, preparation  
Styrene, polymer with acrylonitrile, butyl acrylate, ethylene methacrylate and methacrylonitrile, preparation  
Acrylic acid butyl ester, polymer with acrylonitrile, allyl methacrylate, methyl methacrylate and styrene  
Acrylic acid butyl ester, polymer with acrylonitrile, butyl methacrylate, ethylene methacrylate, methyl methacrylate, styrene and 2,4,6-tris(allyloxy)-s-triazine  
Acrylic acid butyl ester, polymer with acrylonitrile, ethylene methacrylate, methacrylonitrile and styrene  
Acrylic acid butyl ester, polymer with acrylonitrile, methyl methacrylate, styrene and tetraethylene glycol dimethacrylate  
Methacrylic acid, allyl ester, polymer with acrylonitrile, butyl acrylate, methyl methacrylate and styrene  
Methacrylic acid, butyl ester, polymer with acrylonitrile, butyl acrylate, ethylene methacrylate, methyl methacrylate, styrene and 2,4,6-tris(allyloxy)-s-triazine  
Methacrylic acid, diester with tetraethylene glycol, polymer with acrylonitrile, butyl acrylate, methyl methacrylate and styrene  
Methacrylic acid, ethylene ester, polymer with acrylonitrile butyl acrylate, methacrylonitrile and styrene  
Methacrylic acid, ethylene ester, polymer with acrylonitrile, butyl acrylate, butyl methacrylate, methyl methacrylate, styrene and 2,4,6-tris(allyloxy)-s-triazine  
Methacrylonitrile, polymer with acrylonitrile, butyl acrylate, ethylene methacrylate and styrene  
Tetraethylene glycol, dimethacrylate, polymer with acrylonitrile, butyl acrylate, methyl methacrylate and styrene  
s-Triazine, 2,4,6-tris(allyloxy)-, polymer with acrylonitrile, butyl acrylate, butyl methacrylate, ethylene methacrylate, methyl methacrylate and styrene  
RL: PREP (Preparation)  
(graft, shock-resistant)
- IT 9002-86-2P, preparation 9003-54-7P, preparation 9011-87-4P,

preparation 25213-88-1P, preparation 25747-75-5P, preparation  
26299-47-8P, preparation 32505-73-0, preparation  
RL: PREP (Preparation)

IT 32457-40-2P, preparation 32457-42-4, preparation 32457-43-5,  
preparation 32457-44-6, preparation 32505-64-9, preparation  
32505-65-0, preparation **32505-74-1**, preparation 32505-75-2,  
preparation 32505-76-3, preparation 32505-77-4, preparation  
33011-39-1, preparation 33660-17-2, preparation  
RL: PREP (Preparation)

(graft copolymers containing, shock-resistant)  
IT 32457-41-3P, preparation  
RL: PREP (Preparation)

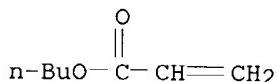
(preparation of)  
IT **32505-74-1**, preparation  
RL: USES (Uses)

(graft, shock-resistant)  
RN 32505-74-1 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl  
2-methyl-2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

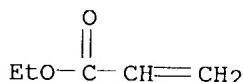
CMF C7 H12 O2



CM 2

CRN 140-88-5

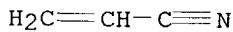
CMF C5 H8 O2



CM 3

CRN 107-13-1

CMF C3 H3 N



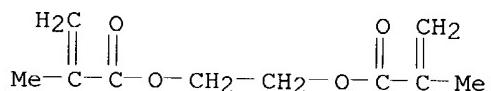
CM 4

CRN 100-42-5  
CMF C8 H8

$$\text{H}_2\text{C}=\text{CH}-\text{Ph}$$

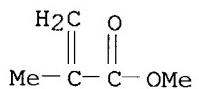
CM 5

CRN 97-90-5  
CMF C10 H14 Q4



CM 6

CRN 80-62-6  
CMF C5 H8 O2



$\Rightarrow$